AMERICAN VOCATIONAL JOURNAL

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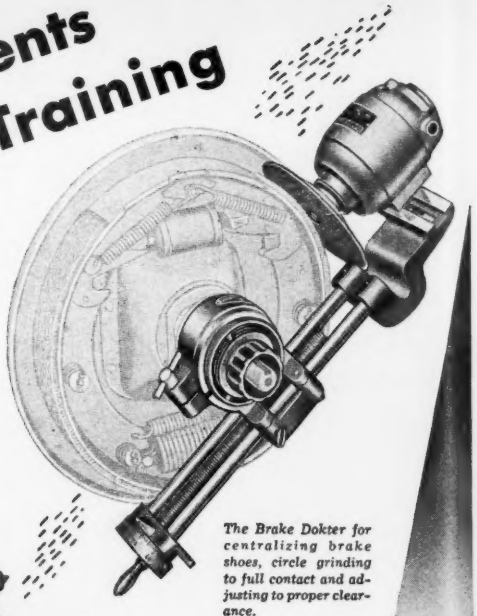

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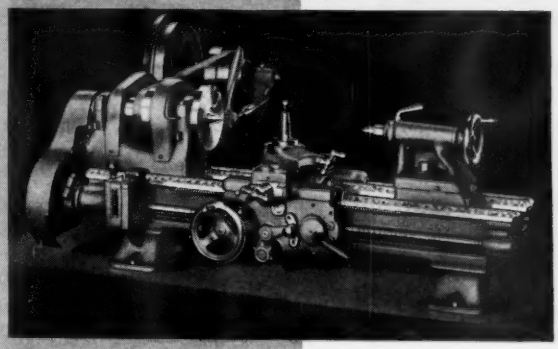

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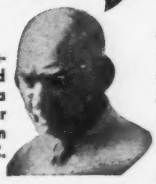

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1. The harvest comes to the school community cannery.

2. Estimating cans for a bushel of tomatoes.

3. Careful! Do it this way and you won't get scalded.

4. Heat controls make peeling easy.

5. Exhaust tables remove all air bubbles.

they eat their "diplomas"

SHORTLY after eight o'clock on a summer morning the first car rolls into the parking space behind the high school; the first car, that is, after the two cars belonging to the agriculture and the homemaking teachers. They arrived earlier: the vocational agriculture teacher to check equipment; the homemaking teacher to prepare for the rush of members scheduled to arrive for the Food Production and Conservation Course, better known as Course No. 15.

The eight o'clock arrival—Mrs. Jenkins—opens the car trunk, disclosing a bushel of dew chilled, gleaming red tomatoes. The agriculture teacher and Mrs. Jenkins bring the heaping crimson basket through the screen doors held open by the homemaking teacher.

No. 15 in Session

Ten minutes later the Doermans—Mr. and Mrs.—they own the dairy farm down the highway—clatter around the corner in their mud-spattered model T. They bring 20 dressed fryers and a bushel of snap beans.

By 8:20 members of nine farm families scheduled for this particular day have arrived bringing fruits of their labor. Grouped around the large wall chart they discuss with the teacher techniques of canning problems of the day. They fire questions at her and the agriculture teacher. Then they turn to the work tables and washing vats. The room fills with the chatter of women clustered around the vegetable cleaning tables and washing vats; the rattling of tin cans and kettles; the noise of steam escaping through retort petcocks.

Course No. 15

Members arrive during scheduled periods; members leave when they finish. They bring their own "laboratory" materials; vegetables from their gardens, poultry from their chicken houses. Vocational homemaking and agriculture teachers are on duty to teach and supervise conservation of food; best methods of raising and harvesting crops for canning; modern food preserving skills; proper nutrition practices in the home. This lesson is only one of a long series conducted for persons enrolled in this center.

This morning scene will recur this summer all across

the country. To more than 3,500 community high school canning centers farm families come by automobile, by truck, by wagon and on foot.

Let's go back to see how Mrs. Jenkins is getting along. At 10 o'clock, just two hours after she arrived, Mrs. Jenkins emerges with her bushel basket now heaped with shining tin cans filled with tomatoes, that is, all except three cans which she donated to the school lunch stockpile. She goes home to a clean kitchen. She leaves knowing that she can turn to other work. The day or time formerly set aside for canning a bushel of tomatoes has been cut to two hours.

What Goes On Here?

What are the facts about the school community cannery development? Is it a trend? Let's look at a few facts.

In 1926 there was one school community canning center—the first one, in Georgia.

In 1940 the number had grown to approximately 500 concentrated largely in Georgia and South Carolina. Stimulated by War Food Production program goals, the number of centers totaled approximately 3,000 in 1943. Five hundred new ones came into operation in 1944; an equal number may be added this summer.

Scarcely any Georgia home is now more than 10 miles from a community cannery. South Carolina has more than 200. Community canneries now operate

. . . when they study food production and preservation with vocational teachers

under school auspices in 40 states and the District of Columbia.

A typical cannery serves 225 to 300 farm families; some large centers serve more than 2,000 families.

During the past year more than 600,000 women and men in farm families learned modern canning methods. They were instructed by 6,000 teachers of vocational agriculture and vocational homemaking.

Congress Can Take a Bow

This army of learners enroll in what is probably the most popular adult education course ever offered in the United States. Course 15, or Food Production and Conservation for family use, received impetus from action by a House of Representatives appropriations sub-committee. When recommendations for Vocational Training for War Industries appropriations came before Congress, the sub-committee asked that $10,000,000 be added for Rural War Training.

Under this and other appropriations vocational education has helped the farmer achieve his Food-for-Freedom goals. It has taught him how to boost production. And in Course 15 vocational education has offered a practical course in food production and preservation at a time when food is precious.

We have one fairly accurate measure of results. During 1944 members studying modern and progressive methods canned over 50,000,000 cans of food—

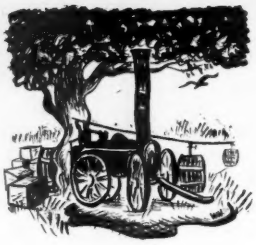
6. Power sealers insure against spoilage.

7. The boiler gives patrons steam in quantity when and where they want it.

8. Into the retorts for cooking.

9. At 8 a.m. the basket held tomatoes; at 10 the tomatoes go home in cans.

corn, beans, tomatoes, peaches, berries, apple sauce, tomato juice, pork, beef and chicken. What thousands of farm families have learned about nutrition and better farming we do not know with equal exactness. We do know that many rural areas are no longer limited to a winter diet of salt meat, potatoes, dried beans, grits and molasses. We do know that the standard of farming and farm living is rising rapidly.



Course 15 is unique in that successful students may and do eat their graduation certificates. And with considerable relish. Instead of framed diplomas Course 15 graduates will take you into the pantry and point with pride to row on row of shining cans filled with nutritious food.

Year Around Cycle

In most communities Course 15 begins in midwinter when heads of farm families meet with homemaking and agriculture teachers to learn and plan for the nutritional needs of their families.

The cycle runs approximately like this:

January: Consideration of family nutrition demands and food required for the coming year.

February: Planning food production for the year; the vegetable garden, fruits, fowl and livestock.

Spring: Preparing the ground, securing seeds of desirable vegetables, planting, obtaining chicks.

Summer: Growing vegetables, harvesting berries, and fruit, and canning as successive crops ripen.

Fall: Harvesting and canning late fruits; slaughtering and canning or curing meats.

At each step of the way there are new skills to learn. A new pest makes its appearance and must be checked. From the "ag" teacher, Course 15 members learn about new varieties, fertilizer practices, insecticides, livestock feeding practices. From the homemaking teacher they learn new facts about nutrition; new combinations of foods; new short cuts in the life of farm homemaking.

Paul Chapman, dean, Georgia College of Agriculture, says that it is like moving home food preservation from the "cradle and flail" stage into the modern "age of the combine."

Where It Began

Mr. Chapman, formerly state supervisor of agricultural education, tells how it all began "in Georgia during the summer of 1926, when J. L. Gilmore, teacher of vocational agriculture, Line School, Franklin County, met some of his patrons under the shade of a convenient tree and using an old sawmill boiler and two barrels processed cans of food products."

Mr. Gilmore certainly started something in Georgia. What has happened in other states appears in an accompanying column.

The open air canning center soon went under cover. First it went into the school building. When it required more elbow room, additions were built. Today the typical school community cannery is a concrete-floored airy building on school grounds. In a nearby room stands the boiler.

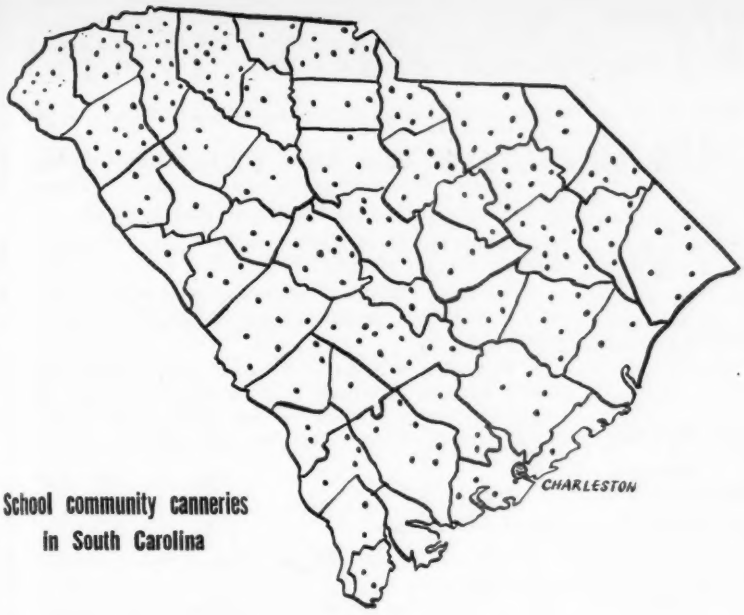
Modern canning equipment stands cheek by jowl, like units on a food assembly line—metal topped cleaning tables, washing vats, blanching vats, power machinery for cutting and grinding food, steam jacketed kettles, steam retorts, power can sealers, baskets, hoists, and cooling tanks. Also handy are smaller but necessary equipment such as special knives, tongs, large ladles, large sieves, large kettles, meat saws, scales and thermometers. Here is equipment only the wealthiest farmer could afford to buy. But the community and the school can buy it for the use of all.

How and How Much

How much does a school community cannery cost? That depends in part on how much a community can and wishes to spend; and on how many families will be trained in the center. Average cost of recently established centers runs from $4,000 to $5,000. Of this

Photos taken at Herndon, Va., by Philip Bonn, U. S. Office of Education

In mid-winter rural patrons meet with their agriculture and homemaking teachers to make their year's plans for food production and preservation.



School community canneries in South Carolina

amount $1,000 to $1,500 will be required for the boiler and other equipment.

Under present provisions of the law, Food Production War Training will finance the purchase of a part of the equipment and pay the costs of instruction and supervision; the local community usually pays for the building. Regularly employed agricultural and homemaking teachers assist with instruction and supervise the entire operation.

What They Say About It

Gov. Sam H. Jones of Louisiana said: "The idea is not that the school should go into the business of canning, dehydration, selling, baby chicks, etc., *but that it should teach the children, the parents and the business people* of the community the advantages of these modern farm ideas."

T. G. Walters, state supervisor of agriculture, Georgia, says that "most school boards in making inquiry about establishing an agricultural department in their school will state they want a person who can teach food processing."

Will They Last?

Others close to the movement say that canneries which have operated as service centers only, have in nearly every case promptly failed. *Only when a canning center operates as a truly educational activity does it succeed.*

Verd Peterson, South Carolina state supervisor of vocational agriculture, said, "The community cannery is a part of the educational equipment which is provided in various communities for the training of people, youth and adults, in a program of better living in South Carolina."

Advantages

R. E. Naugher, who helped to build up South Carolina's strong program, reports that state vocational workshops give these reasons why school community canneries have a bright future:

Advantages in the learning process:

1. Teachers are on hand to give instruction in processing to larger number of patrons.
2. Patrons learn canning by canning their own products.

Two Measures of Wartime Food Conservation. Figures based on survey made in 1943 by the War Food Administration in cooperation with the U. S. Office of Education.

States	School Community Canning Centers	Enrollment in Food Processing Course No. 15*
Alabama	23	9,427
Arizona	20	940
Arkansas	128	24,090
California	70	14,320
Colorado	28	1,262
Connecticut	5	336
Delaware	2	653
Florida	7	11,253
Georgia	537	49,832
Idaho	20	7,040
Illinois	20	24,835
Indiana	4	1,182
Iowa	4	1,102
Kansas	0	473
Kentucky	125	53,545
Louisiana	125	47,183
Maine	0	293
Maryland	10	4,426
Massachusetts	5	33
Michigan	23	3,552
Minnesota	75	16,385
Mississippi	60	49,122
Missouri	125	45,937
Montana	25	4,119
Nebraska	0	113
Nevada	0	149
New Hampshire	5	1,614
New Jersey	2	1,338
New Mexico	24	1,894
New York	2	5,138
North Carolina	250	23,489
North Dakota	17	907
Ohio	15	1,201
Oklahoma	200	20,847
Oregon	20	8,338
Pennsylvania	5	2,581
Rhode Island	0	19
South Carolina	200	26,532
Tennessee	65	17,033
Texas	250	71,877
Utah	40	2,862
Vermont	15	2,599
Virginia	125	25,829
Washington	22	1,917
West Virginia	27	893
Wisconsin	3	1,786
Wyoming	13	572
District of Columbia	2	90
Total	2,733	593,190

*In Georgia and South Carolina particularly, where the program has long been in operation, more patrons use the service than register for Course 15.

3. Patrons exchange information on how to produce better crops.

4. They learn to know higher standards by comparing produce brought in for canning.

5. They learn to work with and help others.

6. They learn to plan their food production and food preservation program to meet definite nutritional needs.

7. They are taught proper canning methods, thus reducing spoilage to a minimum.

8. They are taught to buy tin cans and other supplies cooperatively.

9. Teachers are able to reach more patrons through group instruction.

Advantages to patrons:

1. Saves a third or more time required in canning.

2. Families are saved the expense of equipment, much of it too heavy and costly for normal farm use.

3. The right amount of the right kind of equipment is available.

4. Ample water and steam are available.

5. Steam and hot water controls avoid danger of burns.

6. A hot and messy job is taken out of the kitchen.

7. There are no worries about checking sealers and pressure gauges.

8. Ample supplies of tin cans are on hand.

9. Saving in time reduces spoilage loss and encourages the canning of larger quantities of food at a time.

10. Patrons can exchange produce and thus avoid shortages in specific products.

Advantages to school:

1. Cooperative programs can be readily developed by vocational homemaking and agriculture teachers.

2. Permits the school to serve more patrons.

3. Enables the teachers to know and gain the confidence of more people.

4. Helps to build and maintain good school-community relations, especially by bringing patrons to the school.

5. Provides a means of canning for school lunch needs surplus produce that normally would go to waste. In some centers patrons pay a small service fee with cans of food which are set aside for the school lunch.

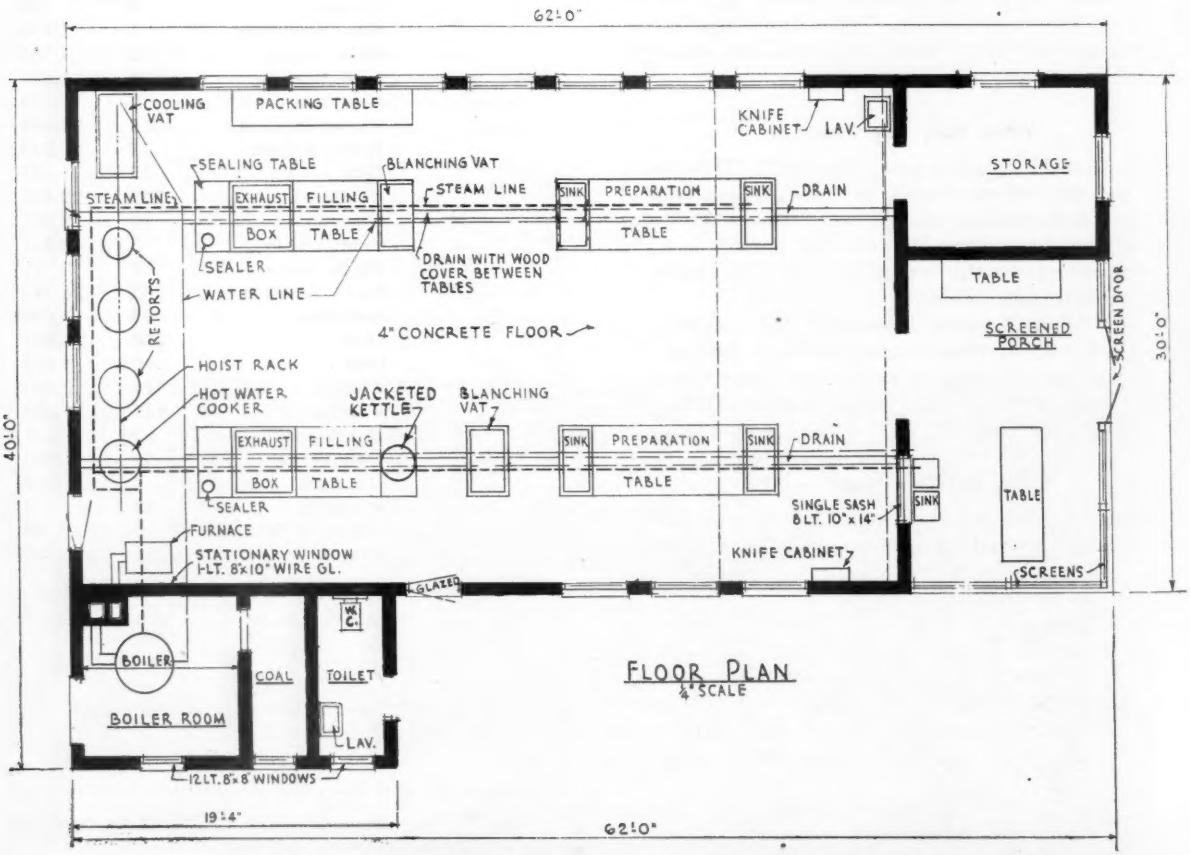
Social advantages:

1. Increase in number and size of home gardens is encouraged.

2. All members of a family help with food preservation; men will help at a cannery when they won't at home.

3. Food preservation becomes popularized throughout the community.

4. A new and useful social center for rural life is promoted.



This two production line school community cannery plan developed by the North Carolina State Board for Vocational Education has been used in many other states.

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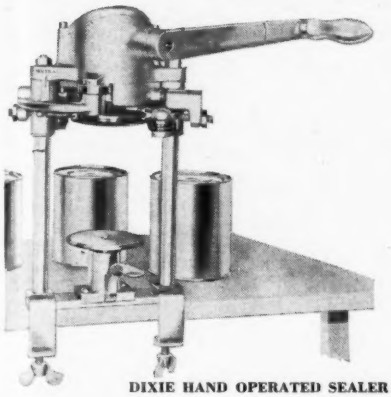

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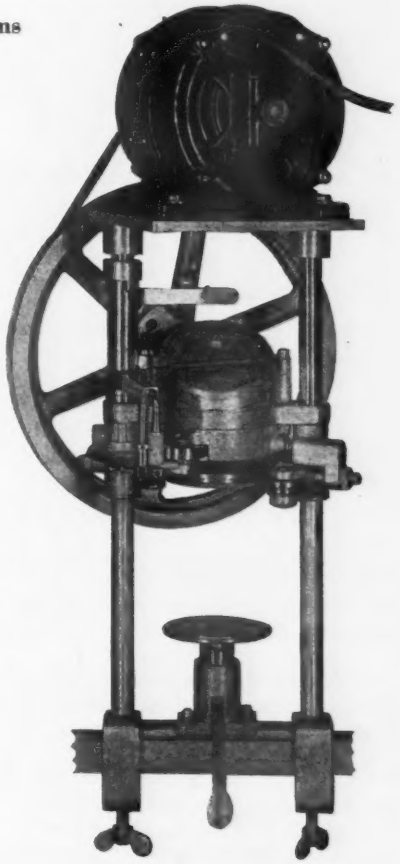

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IN BRIEF

New Federal Vocational Legislation: In response to a demand from all over the country, the American Vocational Association is supporting the request for additional Federal funds for vocational education. Senator George, with five other Senators as co-sponsors, has introduced the vocational bill, S. 619. AVA members desiring copies of the bill should write direct to their United States Senators requesting copies.

New AVA Vice President: The AVA Executive Committee has unanimously selected Julian A. McPhee, State Director of Vocational Education of California, to serve as vice president representing the field of agricultural education to fill the position left vacant by the death of J. A. Guitteau. This appointment is already in effect and will continue until the next AVA convention. For a more extended statement see the April issue of the *American Vocational Journal.*

Twenty-eight editors of education journals attended the first educational press conference in Washington sponsored by the Educational Press Association. Commissioner Studebaker, the interviewee; subject, Office of Education reorganization.

Of 150,000 veterans entitled to rehabilitation training at the close of 1944 only 9,359 were taking courses.

ODT asks all schools and colleges to cancel spring vacations in order to reduce travel.

200,000 of America's best prepared teachers have left the schools, declares C. W. Phillips, North Carolina Women's College; 50,000 more will leave this year. Teacher college enrollments are 60 per cent below 1941. Reason: factory worker average income, $2,235; teachers, $1,550.

"Do you think that girls should plan a career other than homemaking?" 88 per cent of the girls said "Yes" to the Institute of Student Opinion; 55.5 per cent of high school boys agree with them.

Our Obligations for the Future

At present vocational education is in the midst of one of those cycles of educational popularity which is such a common attribute of American education. Almost every educator is conducting a program which at least is named "vocational education."

In order that we may retain our balance in these days of popularity, it might be well for us to analyze some characteristics of our program in the past and to examine some of our future responsibilities.

Let us examine our past program.

First, while Federal funds were employed in support of the vocational education program, there was a proportion of local expenditures, sufficient to provide a local sense of responsibility for the expenditure of vocational funds.

Second, vocational education planning included a high degree of local lay participation, and teaching was based upon the primary interests of students.

Third, actual occupational experience has been an integral part of vocational education, in both teacher requirements and method.

What are our obligations for the future?

First, the program must continue to be based, at least partially, on local financing. When vocational education ceases to be "our local program of vocational education" then it has suffered a major loss.

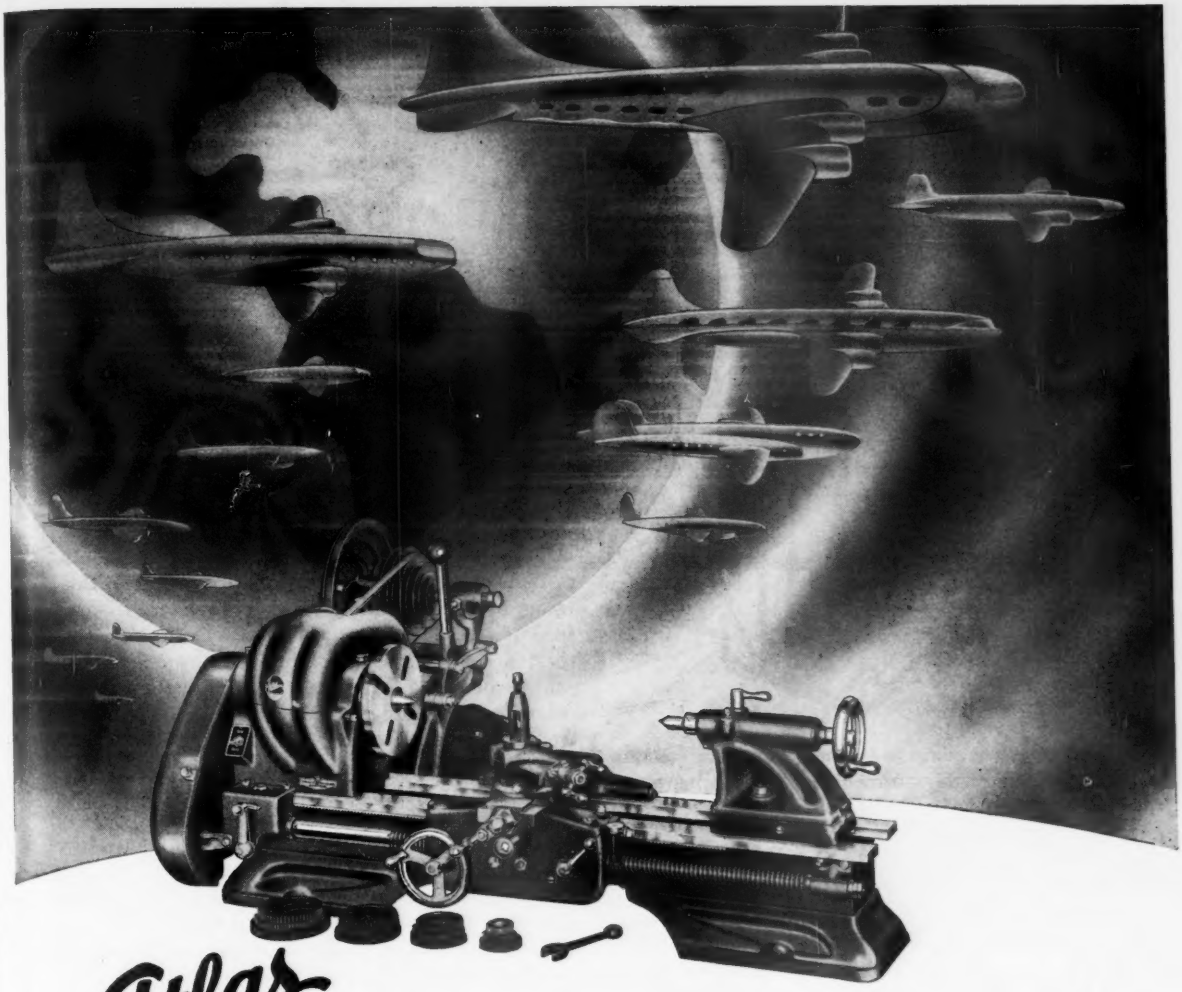
Second, we must study the training needs of the various occupations more thoroughly because of the radical adjustments in the reconversion period.

Third, in providing service to returning veterans we must not only adjust men and women to jobs, we must adjust lives.

Fourth, we must give intelligent support to educational programs designed to give better understanding of social, civic and economic problems.

We have builded well. We must meet our larger obligations.

RAY FIFE
The Ohio State University



Atlas FOR THE WORLD OF TOMORROW

The daily instruction of vocational educators has never before been so important as America looks forward to a period of amazing new developments for better living. Every industry is planning exciting new contributions.

Many of tomorrow's engineers, superintendents, foremen, and craftsmen are getting their mechanical baptism in the shops of American schools.

The war has definitely proved the importance of combining trained imagination with practical "know how" in the handling of basic tools.

Atlas tools are multiplying the opportunities for students to acquire the skills that will be so helpful in their careers.

Postwar instruction will require a great expansion in the kinds and numbers of machine tools in school shops. Get your requisitions and orders in early for next Fall's equipment. Send for latest catalogs and prices today.

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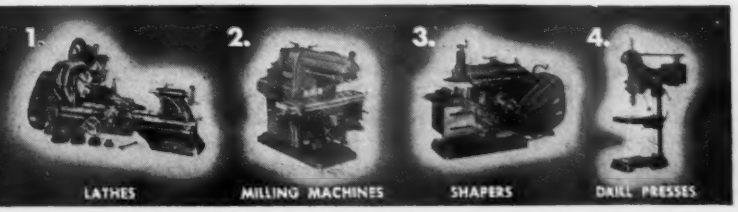
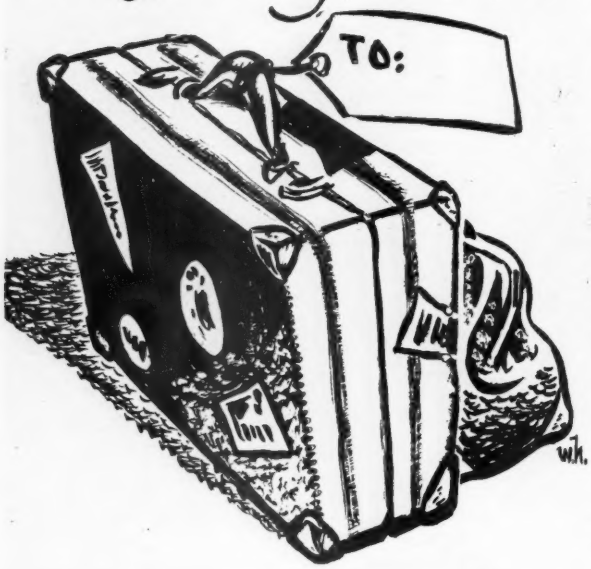


Any Summer Plans?



Improvement Open to Vocational Teachers as Institutions Begin to Announce Summer Programs.

SUMMER school. Among the public, that may call up visions of golden days under the old campus elms. Or of languid hours in classrooms listening to the competing droning of the flies and Professor X.

But times have changed. Indeed, summer school work in vocational education has always been practical. Now it is practical plus.

"Summer school" in 1945 means working in Ford or Chrysler (plus teacher training). It means work in Kaufmann's store in Pittsburgh and Hudson's in Detroit (plus teacher training). It means hard work in a community cannery in Arkansas (plus teacher training).

It means workshops and work conferences and individual attack on individual problems in curriculum laboratories.

Recently the American Vocational Association asked state vocational directors for information on summer teacher training opportunities. The AVA asked for the new and unique because the standard courses are in the catalogs.

Many states reported that their summer plans had not yet crystallized. We are saving space in later AVJournal issues for additional announcements.

You will note certain trends appearing in this summary. More attention on how to handle community problems. More provisions for combining work experience with teacher training. More consideration of new problems facing vocational education such as veteran training, aviation and nutrition education. More realization of the need for knowing federal and state laws, regulations and programs.

The many summer training opportunities here recorded witness the determination of vocational education to equip itself to meet new problems; to translate new research findings into community life practice; to keep abreast of industrial and agricultural practice. In short, to be "on the ball!"

Here are unique or new summer educational opportunity features reported to us to date. If you want more information on any one, write to the institution or the state vocational director.

Arkansas: Teachers of agriculture and home economics will have an opportunity to attend a workshop on maintenance and operation of a steam canning plant for community use (May 28 to June 2). The

In summer, vocational leaders meet with graduate students in many special workshops, institutes and panel discussions. In this panel at Pennsylvania State College seated are: Edward Berman, Bayonne, N. J., pres., National Council of Local Administrators; George H. Parkes, dir., Williamsport, Pa., Tech. Inst.; Theodore H. Wilson, pres., U. of Baltimore; William Rasche, dir., Milwaukee Vocational School; Laura Drummond, dir., home economics dept., Pennsylvania State College; J. O. Keller, asst. to the pres., Pennsylvania State College; L. H. Dennis, chairman of the panel; John A. McCarthy, Asst. Commissioner of Ed., N. J.; Walter C. Eells, exec. sec., Amer. Assoc. of Junior Colleges; George D. Fern of Michigan; Paul L. Cressman of Pennsylvania; C. A. Fisher, dir., Extension Service, U. of Mich.; H. C. Fetterolf, chief, ag. ed., Penn. St. Dept. of Ed.; Henry S. Brunner, head dept. of ag. ed., Pennsylvania State College. Vocational educators taking graduate work make up the audience.

TEXTS FOR YOUR VOCATIONAL COURSES

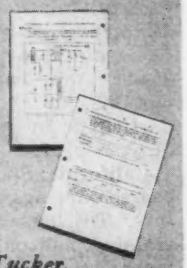
for your reconversion program

Engineering Preview

By
L. E. Grinter & Others

An excellent text for returning veterans and others preparing for post-war jobs, this book gives a complete orientation in modern engineering, teaching the fundamental principles, the basic techniques (including math and drawing) and the chief modern developments in each branch. Illus. $4.50

Electricity and Radio



Shop Job Sheets in Radio

By Auble. Practical, what-to-do exercises in actual operational and production work. Highly recommended as "the best of their type." Bk. 1: Fundamentals; Bk. 2: Service Problems. Each, Illus. $1.50

Introduction to Practical Radio *by Tucker.* Ready in April. $3.00

Principles of Radio for Operators *by Atherton.* Ready in May. $3.75

Elementary Book on Electricity and Magnetism and Their Applications *by Jackson, Jackson and Black.* Illus. $3.00

Shop Mathematics

Basic Mathematics for War & Industry

By Daus, Gleason and Whyburn. Clearly explains how to use arithmetic, algebra, geometry and trigonometry in all the trades and industrial work. 800 up-to-date problems for training. Illus. $2.00

Shop Mathematics *by Christman.* $2.80

Vital Mathematics *by Allen, Maly and Starkey.* $1.80

for the kind of shop training required by industry

Lathe Operations

Milling Machine Operations

By King. Detailed directions, including all necessary technical information, for each operation performed on lathes and milling machines, written by an experienced teacher and master toolmaker for maximum efficiency in training machine shop workers. Fully illus. Each $1.75

Fundamentals of Shopwork *by Johnson and Newkirk.* $1.32

General Shop Work *by Ashcroft and Easton.* $2.40

Practical Marine Electricity

By LeCount and Dusenbery. How to install, operate, and maintain all the electrical equipment found on merchant ships. (May) $3.50

Aeronautics

Aerodynamics

By Parkinson. A simple presentation, requiring only high school math, of the principles basic to aircraft design. Includes much practical information. Illus. $2.25

Drafting

Modern Drafting

By Johnson and Newkirk. "Tops them all for secondary-school use in mechanical drawing. The easy, concise method of presentation, illustrated by modern, clean-cut diagrams, drawings and photographs, make this book easily understood and comprehensive." P. F. Marsaw, Dir., Ind. Arts, Worcester. Illus. $1.72

Technical Drawing for High Schools *by Williams and Spencer.* Workbook 1. $1.80
Workbook 2. $1.60

Aircraft Drafting *by Katz.* Ready in Sept. $4.75

Examination copies free to principals and supervisors. Send for our complete catalog.

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Management in Daily Living

By Bonde. Simple, specific information on how to apply professional management principles in the home. Illus. $2.50

Marriage & Family Relationships

By Foster. Answers the questions most asked by young people on courtship and marriage. Illus. $2.50

Introduction to Foods & Nutrition

By Sherman and Lanford. All the essential information, simply presented by experts. Illus. $2.50

Living with Children

By Chittenden. A simple, helpfully explicit text on child psychology and guidance. Illus. $1.75

60 Fifth Avenue **THE MACMILLAN COMPANY** New York 11, N. Y.

workshop will utilize the university's campus steam canning facilities. From June 12 to 30 there will be special courses for administrators on cooperative vocational program planning. Another workshop, June 18 to 29, will aid teachers in translating technical data on resources of Arkansas, Louisiana, Oklahoma, and Texas, into teaching materials. Experts from food, clothing, drug, furniture and hardware trades will participate in a conference on distributive education, July 2 to 21.

California: Special summer session and special short-course offerings announced thus far include— *Agriculture:* Teachers are being polled for choice of skills training, and one week of "teachers' choice" plus the annual conference at California Polytechnic College June 19-27. *Distributive Occupations:* The University of California, in cooperation with the California Bureau of Business Education, will offer July 2-Aug. 10: Introduction to Distributive Education, Workshop in Distributive Education, Cooperative in Distributive Education, and Allied Cooperative Distributive Education. *Occupational Information and Guidance:* Stanford University will offer a summer quarter workshop for high school counselors and administrators. Occidental College will offer a program in clinical testing to counselors and specialists. The University of California at Los Angeles will offer a two-hour integrated course for guidance workers.

Aircraft and aviation industry will be featured in the industrial arts workshop announced by Santa Barbara College of the University of California, July 2 to August 10. The workshop will carry further experimental work launched at Santa Barbara last summer.

Idaho: One feature of the University of Idaho's summer session will be the home economics workshop. Basis for study will be the revision of the Idaho Homemaking Teachers Guide. The workshop will provide the first opportunity for many Idaho homemaking teachers who have been working on this project to pool their ideas and begin the revision.

Illinois: Consideration of veteran education programs, community study, program planning and advisory councils feature plans for two four-week graduate programs in agricultural education at University of Illinois. Approximately half of each course will be devoted to classwork and half to workshop activities. In home economics curriculum problems and trends, adult education, pre-service and in-service training and supervision are items in two summer term offerings for graduate students.

Kansas: Plans for a program in distributive education have been projected. Kansas State Teachers College, Emporia, Kansas, will be the center for this program to be announced later.

Louisiana: In-service training programs are expected to follow the pattern of last year. This will mean a work conference enabling industrial education teachers to become better acquainted with job instructor, time-motion studies, etc. It also means in-service training institutes in arts and crafts activities of special concern to industrial arts teachers.

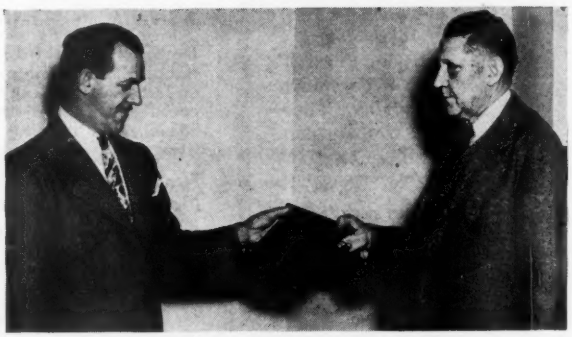
Mississippi: Both on-campus and off-campus training for agriculture and home economics teachers on graduate level will be offered by the Mississippi State College. On-campus work will be two weeks long, concentrating on planning for community educational programs in food production, nutrition, and conservation. Off-campus activities will include teaching and follow-up of farm families in the community with a view to improving nutrition and health conditions of individual members of each farm family. Later in the year the group will reassemble on the campus for an evaluation of services.

Michigan: In addition to the in-service training programs (See report in the April *AVJournal.*) there will be a Guidance Workshop at the University of Michigan. Pupils from nearby schools attending camp will be the "laboratory" for still another Guidance Workshop scheduled by the Western Michigan College of Education at Clear Lake. Michigan State College plans a Guidance Conference for guidance organizations.

Local coordinators and directors of vocational education have again been invited to the annual summer conference scheduled at Higgins Lake, July 23-27. Four major problems to be taken up are: (1) the technique for leading conferences, (2) the relationship with the Federal Apprenticeship Committee in the conduct of the apprentice training program, (3) techniques of coordination, and (4) methods of correlating related subjects with work experience.

In addition business education coordinators will receive leadership training at Western Michigan College of Education. For teachers of agricultural education there will be a special three week course at Michigan State College on in-service problems in course building, teaching farm shop, planning local programs, and special problems. There will be a special six week course for persons teaching under war emergency certificates. In-service visitations are planned.

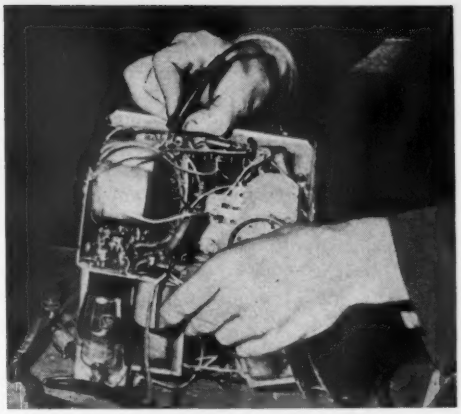
SAFETY AWARDS PRESENTED



The AVA conference at Philadelphia saw the presentation of the first two annual Barrett Awards. These awards are made in recognition of outstanding achievement in promoting safety through brake maintenance training. They were presented to L. S. Hawkins (upper photo, right), director of vocational training for war production workers, U. S. Office of Education and M. Reed Bass (lower photo, left), director of the David Ranken, Jr. School of Mechanical Trades, St. Louis, Mo. Harry B. Barrett, Barrett Equipment Co., presented the plaques.

PRECISE HANDS

These hands belong to the young craftsman in your class. They are going to do the practical jobs of tomorrow's world—jobs towards which you are expertly guiding them.



...for practical jobs

AND AN INFORMED MIND

This head belongs to the future citizen. It alone will determine whether tomorrow's world will be a worthwhile shop in which to work.

To help this head surround these talented hands with the fullest opportunities for future success is one of the big teaching problems today. But, there is a convenient classroom tool that enables teachers to simplify and hasten this vital maturing of young minds.

SCHOLASTIC MAGAZINES can help you prepare your students for better postwar living, make them more adaptable to changing work conditions, with a complete graded program of specially prepared material for social studies and English classes. Selections from the best contemporary literature, clear interpretations of current happenings, plus valuable background information, is presented in a way that 16,000 teacher-users find time-saving, easy-to-teach, and popular with their students.

Because of these advantages, an ever-increasing number of vocational teachers are using SCHOLASTIC MAGAZINES in their classes every week. Although SCHOLASTIC has reached its W.P.B. paper quota and is completely sold out for the current semester, we will be glad to send you sample copies and detailed information regarding editorial content, prices, etc.

Write today, indicating the grade and subject you teach, so that we can send you the magazine that especially fits your needs.

Photo West High-Times, Madison, Wisc.

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220 East 42nd Street, New York 17, N. Y.

by Paul H. Nystrom

Buying is our B

A GROWING dependence upon distribution for postwar prosperity begins to dawn on our people. Who is better equipped to spell out this trend and what it means for vocational education than Paul H. Nystrom, professor of marketing in Columbia University's School of Business? President of the Limited Price Variety Stores Association, Inc., he is also a leader in the New York Sales Executive Club. Author of numerous books on distribution, Dr. Nystrom speaks for business on the Federal Board for Vocational Education. In AVA councils his wisdom and judgment helped to guide the organization during his two terms of office.

In this article we call twice on Dr. Nystrom; once for a statement prepared especially for the AVJournal, and, in addition, for his estimate of distribution changes he sees ahead.

Earl B. Webb, Editorial Board member for Business Education, says: "Dr. Nystrom's excellent description in review of the problems now facing distribution should also have real meaning to administrative personnel in the fields of agriculture, homemaking and industry. Distribution cannot stand alone in meeting these obligations of added volume and greater employment opportunities. Simple analysis of the interests in a postwar economy of vocational education demonstrates the urgency *now* of a singleness of purpose; of endeavors mutually and consciously directed toward common ends."

WE NOW face the postwar possibility that our productive capacities may far exceed the ability of our distributive system to find markets for and to distribute these goods. This great danger confronts us unless comprehensive and far reaching efforts are made to bring our marketing system up to the level and needs of our productive system.

We know that the factories and farms of this country are producing more than they ever did before in spite of the military draft taking more than 13,000,000 men. They are producing enough to take care of our military needs, our civilian economy, and a great deal besides for lend-lease, relief and other purposes.

This high productive capacity has been due to splendid equipment, resources, and even more importantly, to the genius and drive of American management and to trained abilities of factory and farm workers. High technical competence of factory workers and farmers in this country is directly due to the training carried on under the Smith-Hughes Act during the past 25 years. Our hats are off to the job done by vocational education in industry and farming.

To Avoid Depression

Postwar requirements for national prosperity include gainful employment for at least 57,000,000 persons. Such employment at fair rates of wages and income will mean a total national income of at least $135 billions as against $80 billions in 1940. To maintain this new high level of employment and national income under peacetime conditions means that our productive mechanism of factories and farms must operate to capacity. It also means that our marketing or distributive system must be raised to the point where it will provide outlets to consumers, both domestic and export, for all these goods. If our distributive system fails to accomplish this there will be a decline in production. There will be increased unemployment in industry and agriculture. There will be depression and disaster.

The job that lies ahead and that must be accomplished by our distributive system, if we are to assure ourselves of continuing national prosperity, is not simple. Indeed, it is almost staggering. It involves increased distribution of goods amounting to not less than 50 per cent more than were handled and sold in 1940. It means that there must be 50 per cent more goods sold through wholesalers and retailers.

There must not only be a great many more workers in the field of distribution: salesmen, advertisers, service people and so on, but they must all, both new and old, be very much more effective.

We may not merely hope to get back to 1940 levels. We must find ways of distributing products at much higher levels than ever reached before.

Training Responsibilities

Teachers, coordinators and administrative officers in business education share common responsibility with business for the development of efficient postwar marketing systems. We must not merely have more retailers, wholesalers and producers sales organizations. We must also have highly trained and skilled workers in all of these institutions. Training is as essential to the marketing occupations as it is to production. In the postwar period it is even more essential. This is the time to prepare to develop our postwar marketing system.

We may draw valuable inspiration and lessons from the intensive training program successfully applied in building our military system. Every man in the military service has been rigorously selected and then thoroughly schooled and trained for special work. Upon such selection and training depend the success of our armies and navies and, indeed, of our national safety.

Military Example

What is so absolutely essential for the winning of the war is equally necessary for winning the peace and regaining prosperity. Workers in the distributive

We Can Raise Ourselves to Full Employment Only Through Trade Expansion and That Means More Vocationally Trained Workers

rBootstrap

Paul H. Nystrom

trades need to be selected and trained just as systematically as soldiers, sailors and marines. We must have a new conception of the possibilities and profitability of training. In preparation for responsibilities ahead, workers in distributive trades will need pre-induction education. Employers and executives as well as the workers themselves should insist on their public schools giving such education. When employment conditions again become normal employers should insist on their prospective employees having had such training.

Workers on the jobs of distribution as well as on the jobs of production need training for greater efficiency. They need constant training to maintain high levels of productivity. They need special training for promotion. We must somehow learn that training for business, just as training for professions, must go on so long as a man or woman works.

Training does not merely fit a worker for the performance of an activity. It is increased interest in the work to be done. It develops better understanding of opportunities for advancement and for special careers.

Training for the distributive trades, as well as other branches of business, should be thorough and rigorous. Development of increased knowledge and skilled craftsmanship is not enough. Stamina and discipline for greater day-in and day-out productiveness are required. Also, a higher sense of professional morale. We in business must look to systematic, scientific training for prompt results, just as the military has done and is doing.

PREDICTIONS FOR POSTWAR TRADE

Many people are wondering whether the postwar period may bring any startling changes in the distribution of goods. So far as I can see there are not likely to be any revolutions either in the channels or methods of distribution.

The wholesaler-independent system, which has made extensive and remarkable gains during recent years, is likely to hold its own and should continue to parallel the growth of future distribution of goods. In spite of the rise of chains, mail order houses and department stores, the independent retail store business is represented today by more retail stores and enjoys a greater volume of business than ever.

Changes may certainly be expected within the various channels of distribution. Retailers' cooperatives, group buying and voluntary chains are likely to have additional growth and, more particularly, to get down to more effective and systematic methods of doing business. Wholesaling is destined to further streamlining. More extensive developments in cooperative marketing in the producer and processing field seem inevitable.

Manufacturers branches: Since 1929 there has been a rather rapid development of the system of manufacturers' branch distribution. Such branches have to some extent displaced wholesalers. In a few instances such branch systems have been extended to displace the traditional or customary retail channels. We have probably not seen the end of this movement. It seems likely that a considerable number of manufacturing concerns, particularly those now in the war industries, concerns that are new and have no established relationships with distributors or retailers, and others whose relationships have been sharply broken off, may attempt distribution through owned branches. Expansion in this way will for a time at least be easy to finance from war earned reserves and newly expanded credit. That this method of distribution may prove more economical than the wholesaler-independent or chain store systems of distribution, or that it may be the means of greater efficiencies over any present form of distribution, have yet to be proved.

Department stores are likely to hold their own with other important retail channels of trade.

Variety stores are, I believe, certain to enjoy considerable expansion, but may follow the pattern of growth shown for these stores in the past; namely, not to grow as fast in a boom period, but, on the other hand, not to decline as fast or as far in a depression.

Supermarkets in the food field and road-side retail establishments of various kinds seem destined to expand considerably before they reach their leveling off periods. Certainly the trend away from small specialty food stores may still continue.

There may be question, however, whether self-service which has expanded so enormously under the necessities of war will continue at the same high levels. The outlook for retail self-service is to a considerable

(Concluded on page 44)

U. S. Office of Education photo

Push out your schoo

Courtesy, International Harvester Co.

TWO of the nation's five FM educational stations can be found in vocational schools—San Francisco's KALW in the Samuel Gompers Trade School, and New York City's WNYE in the Brooklyn Technical High School.

These "early birds" are forerunners of new wings for vocational education—and, indeed, for all education. Plans now well advanced call for the building of more than 250 school owned and operated FM stations within five years after the war. Ultimately we may have 800.

What is FM? What can it mean to you?

What can you do about getting an educational FM station in your community? How much will it cost?

walls with FM

Where can you turn for more information about FM?

FM is often called "radio's *better* mouse trap." At present you tune in to AM or *amplitude modulation* radio. FM is *frequency modulation* radio.

FM cuts out practically all static; it insures better quality listening. After the war when you go to buy a new radio you will be shown a combination FM-AM receiver. This will be able to pick up present broadcast stations and hundreds of new FM commercial and educational stations.

Now, what can FM mean to you? Quite a good deal now that the Federal Communications Commission has approved the request made by the AVA with some 30 other national educational organizations and the U. S. Commissioner of Education. The FCC has allocated 20 FM channels for exclusive use of schools and colleges.

Education was asleep to the importance of radio when the first licenses were given out. Now we have a second chance. If we are alert, a priceless opportunity will come to our hands. If we slumber there may *never be a third chance!* The radio spectrum is exhaustible.

AVA Leaders on FM

Here are estimates which a few vocational leaders place on radio and FM educational radio stations. These are excerpted from the AVA's testimony.

George H. Fern, director, Michigan State Board for Vocational Education: "The Michigan State Board for Vocational Education has utilized the facilities of Station WKAR (operated by Michigan State College at Lansing) for regular weekly broadcasts during the past two years. We are convinced that this medium has brought the services and activities of vocational education to the attention of a large and important group of people. The Michigan State Board, through its Audio-Visual Aids Service helped to initiate the movement for a statewide FM educational network. We have not lost any of our enthusiasm or faith in the merits of this project. When this educational radio network becomes a reality, a new tool will be available to educators which will help them accomplish greater results in public education at all age levels and for all groups."

M. D. Mobley, State Director of Vocational Education for Georgia, and AVA president:

"This nation and its democratic form of government depends in a large degree upon the education of its

U. S. Office of Education photos

a postwar educational radio station can bring every home within earshot

Photo by Francis Schwartz

Student radio engineers and program directors learn their duties at WNYE, the New York Board of Education's FM station.

Photo from KALW, San Francisco's FM station in the Samuel Gompers Trades School.

With an estimated 4,000 FM stations to be built in the United States after the war we will need competent technicians.

present and future citizens. Nothing should stand in the way of using such a practical medium as the radio for strengthening our educational program."

Ray Fife, professor of agricultural education, Ohio State University: "The greatest expansion by radio will be in the out-of-school youth and adult fields. Young men on farms, returning veterans and young men who will return to the farms from industry will probably wish to have a much broader program of education than was offered in the prewar period. A very large proportion of civic and other instruction will be highly informal in nature for in this field there is a very marked need for radio programs organized on a national, state or regional basis."

Howard A. Campion, past president, National Council of Local Administrators of Vocational Education and Practical Arts: "Radio seems to be an ideal medium for securing an up to date contact with the occupational world. Radio will be one of the most important of the teaching devices in the years immediately ahead."

L. H. Dennis, executive secretary of the American Vocational Association, says: "We are certain that teachers and administrators of all phases of vocational education will find ways and means to use expanded radio facilities. They will use them to improve education and to improve standards of living throughout the nation. We are also confident that the establishment of school owned and operated stations will enable vocational education to train technicians who will in turn advance the entire art of radio."

Julian A. McPhee, recently appointed Director of Vocational Education for California, reports 15 years of practical and successful experience with radio as an aid to FFA development.

"Our early participation in radio consisted of presenting outstanding Future Farmers on various local and network stations. These boys told of their home farming programs and local chapter activities, and the programs were useful in promoting interest in vocational agricultural education.

"In addition to this series which appeared every month, this office prepared actual agricultural teaching material which was broadcast directly to schools for a period of four school years, between 1933 and 1937. The program was called *Vocational Agriculture,* and appeared once each week during the school year.

"We have in the West some excellent examples of radio stations which have been maintained entirely in the public interest for educational purposes. One of these stations is KOAC, at the Oregon State College at Corvallis. This station is well-received in the northwest with suggestions to farmers and other service information. Vocational agriculture programs are broadcast regularly."

Others also see a bright future ahead for FM educational stations. In its official report the FCC declares: "The testimony and exhibits show that the service which these noncommercial educational FM stations propose to render is of outstanding merit, and may profoundly affect not only American education but our democratic institutions as a whole."

The radio industry encourages allocation for channels for education. Major Edwin H. Armstrong, father of FM radio says: "An outstanding opportunity for peace-time service is just beginning to emerge in the field of educational broadcasting."

What Do You Need?

Suppose you want educational FM radio service in your community. What do you need? You need: (1) programs worth listening to, (2) studios, (3) engineer and management services, (4) a transmitter to throw program signals out on (5) a wave length from (6) an antenna mounted on (7) a tower or mast, to be picked up by (8) receivers tuned in by receptive (9) listeners.

Most elusive element will be "programs." Although educational FM stations need not operate 12 or 18 hours per day (no minimum hours of operation is prescribed for education stations) programs must be created that will hold attention and serve educational aims.

Studios, transmitters, antennae can be bought or built; studio managers and engineers can be hired.

The license to use a wave length must come from the Federal Communications Commission in Washington. Although most licenses will be requested in the name of a board of education or university, practically all states will require that license requests fit a master state plan. Twenty FM channels will permit service throughout a state. To assure state-wide coverage, more than 30 states are already developing master plans. Before you apply for an FM license, check with your state department of education; get their O. K.

(Concluded on page 41)

Just a moment, Dr. Hutchins

Collier's Magazine for December 30 carried a broadside attack on the GI Bill of Rights by Robert Maynard Hutchins, president of the University of Chicago. Paying his usual respects to vocational training he declared, "Unless the veterans' educational program can be safeguarded it will degenerate into a vocational training program."

Criticism of vocational education by Dr. Hutchins can scarcely come under the head of news. However, in this instance he offered examples and statistics in an endeavor to support his contentions. Therefore, it becomes important to keep the record straight.

F. H. McMahon, registrar, North Dakota State School of Science, Wahpeton, N. D., an educator with long experience both in higher and vocational education, has undertaken to correct the record as follows:

"The chief error in Mr. Hutchins' attack is that he does not distinguish between public and private vocational training. He mentions, for example, the small number of Diesel operators employed by 1934 as against the large number trained. In the '30s I have seen many advertisements from private vocational schools as to vast opportunities in Diesel. We did not offer this at all for the simple reason that we knew that there was lack of opportunity, and were, therefore, unwilling to deceive students. Private schools vary in honesty and efficiency, but all of them are affected strongly by a profit motive. Our own practice has been to give honest advice, and I believe that practice is usual in public vocational education.

"Dr. Hutchins' assertion as to bookkeepers corresponds pretty closely with our own experience. During the middle '30s, many men coming here for a two-year accounting course asked us about employment, and we told them that the chances were good for those who were rated within the upper fifty per cent. Dr. Hutchins' percentage is somewhat lower, but he is taking into account a great many who had only nine months of training, as against eighteen; and he was also taking into account that many of these were trained in private schools which simply had to have students in order to exist.

"During the same period, we told aviation students that there was hardly any chance for employment; and yet a great many took a course in aviation ground work because that is what they wanted to do; and a great many of these people found opportunity for profit and highly necessary service during the war.

"It quite often happens that a man will deliberately choose training toward what he likes to do, go to work at something else, and wait for later opportunity within his chosen vocation.

"When Dr. Hutchins says that industry can give mechanical training to its employees in a period of a few weeks, he is talking about unskilled labor. You do not train an all-around mechanic in a period of a few weeks, or an expert machinist, or a printer, or an accountant, or a ground mechanic in aviation. I could go on considerably further in naming trades which require one or two years, or more, of apprentice training. Under present conditions the first year or two of such apprenticeship can best be provided in a vocational school.

"It is distinctly to the credit of Dr. Hutchins that he wants equality in educational opportunity, but when he would limit educational opportunity to the cultural side, he is squarely up against the fact that a majority of those who graduate from high school do not want cultural education, even though they might be adapted for it. Over a period of 30 years, many of our best students have deliberately chosen vocational education. In most cases they got what they wanted."

SCHOOL LEAVERS: ...how many? ...why?

ANY business that lost one fourth of its potential customers would begin to make inquiries. High schools are substantially in that position. Yet little attention has been paid to those who drop out of schools. One small city decided to find out more about school leavers.

The city has a high school population of approximately 1100. During the school year September, 1943 through June, 1944, 123 boys left school. Of this number 17 moved away or went to private schools. Therefore, the drop-outs numbered 106. Analysis of this group showed 45 left, going into the armed forces. That leaves 61, of which two were expelled, two left for health reasons, 57 left to go to work or merely because they were "dissatisfied with school."

Although half left at the end of the semester year, 63 dropped out while school was in session; 40 for reasons other than going into the service. This means that an average of more than one a week dropped school. Examination of birth records showed that 159 boys became 16 in the year beginning June, 1943. Some moved away before entering high school and 26 left school as soon as they could legally.

One boy in six leaves school just as soon as the law permits. Nearly one-third drop out while they are still 16 years old.

The record of the girls is roughly similar. In the same period 94 left, but 33 continued their education elsewhere. There were 61 drop-outs; 25 did not return after the close of the year in June; 36 dropped out while school was in session. Again an average of about one a week. Assuming that about the same number of girls as boys become 16, the drop-outs are nearly as large. Over 15 per cent dropped out as soon as they became 16; another 11 per cent dropped out before reaching the age of 17. The total drop-out while still 16 is 20 per cent, better than one out of four.

6000 answered the Army-Navy call for 800,000 model planes

The Air Fleet Education Bu

BY WARD P. BEARD,
U. S. Office of Education

NOW it can be told. An American flyer who got his plane off the ground at Pearl Harbor reported that he suffered more damage *from his comrades* than from the Japs. One of the greatest hazards faced by our flyers was the likelihood of being shot down by our own forces; by other flyers or by antiaircraft crews.

Contrary to some opinions commercial models were not available. Metal and rubber restrictions did not permit their use. Plaster was not suitable. Problems of molding plastics to the accuracy required had not been solved.

In this emergency the Navy Bureau of Aeronautics decided to call upon the schools. Officers consulted the U. S. Office of Education. Here were the nation's schools with instructors, student personnel, and tools and facilities needed for model aircraft construction. For the first time in many shops educational and production standards had to be combined.

So the Model Aircraft Project was launched. In 22 months 800,000 youth in 6,000 schools, under the supervision of 6,000 teachers, participated. By December 31, 1943, commercial production problems had been solved so the project was terminated on a national basis.

Credit for the remarkable accomplishment goes to industrial arts and vocational teachers and their students who produced the model planes. Credit must also go to the hundreds of craftsmen who served on local inspection committees. Sharing in the glory are those who served as state and local project directors.

Navy Drew Plans

The Navy Bureau of Aeronautics assumed the responsibility for gathering information about planes of friendly and enemy nations. It prepared the detailed drawings for use in making the models and cooperated with the Office of Education in preparing instructional materials. Securing information on enemy planes was extremely difficult. Many plans had to be made from photographs. Fragmentary information was pieced together until sufficient data were available to reconstruct the outlines and details.

Almost as serious was the difficulty of keeping up with changes made in our own and Allied planes. For example, plans and specifications were ready for reproduction when the engine on one of the planes was changed. Plans and specifications had to be redrawn.

Mailing of plans and specifications and other instructional materials was itself a huge undertaking. The first mailing involved sending 8,500 large manila envelopes containing 850,000 pieces of material. There were five subsequent shipments averaging over five tons per shipment.

One unique feature should be recorded: This project was carried on without any special Federal appropriation. Federal personnel responsible shouldered the work incidental to their regular duties. Many states and cities assigned persons full-time.

Confidential information went to state and local directors telling how and where to ship the model planes and how they should be packed and billed. Addresses of Army, Navy and Civil Aeronautics Administration receiving centers had to be kept confidential to prevent individuals from sending in worthless models. Of the many thousands of shipments only a small fraction went astray. In most cases even those were located.

Not "Busy Work"

During the first few months some people criticized the project as unnecessary. They called it "busy work" to make the schools believe they were making a contribution to the war. Letters from military officials and men on the fighting fronts soon changed this attitude.

An ace, who bagged 16 Jap planes over Guadalcanal, wrote: "Model airplanes can be a real life saver, and I am not exaggerating one bit. I used them in my early training, and many of my squadron, pilots of the Fighting 23rd, have repeatedly said that they might have shot down their own buddies if model airplanes hadn't taught them identification."

Another Army flyer wrote: "I want to stress the importance of the Navy Model Aircraft Building Project. If the people would only realize how much it means to us to be able to spot an enemy plane instantly, and so be able to employ the proper tactics for victory, perhaps they would spend a few nights at home working for us."

Military Uses

Military officials used model planes in a variety of ways. In many cases they were hung about classrooms convenient for study at all times. The planes were handled and studied in detail until readily recognized from any angle. In some centers the planes were suspended in a dark box. When a light flashed on for a fraction of a second, the soldier or sailor was expected to identify the plane.

From time to time the U. S. Office of Education received requests from Army and Navy officials for model planes for special uses. Significant requests were for 20 B-17-Es, Flying Fortresses, to study flying formations and fire patterns. Another request was for certain model planes to be used in determining the best way in which to load the fully assembled planes on decks of tankers for shipping to foreign countries. A model tanker of the same scale was built. Models were also used for range estimation and determining the cone of fire and the blind spots in enemy planes. Similarly, the models were used to study the cones of fire in our own planes in order to eliminate blind spots.

Time and Materials

On the basis of a report from several large cities and small communities in New York State, it is estimated that the wood, glue, paint, putty, sandpaper, etc. used in model making cost $15 per set of 80 models. Reports indicate that over 800,000 models, or 10,000 sets were made, although not all of them were

Built

approved for shipment to receiving centers. We can estimate, therefore, that schools and cooperating groups put $150,000 into materials.

One instructor timed himself accurately. It took two hours to make the Brewster F2A-3, U. S. Navy Fighter, and 22 hours to build the Consolidated PB2Y-3, U. S. Navy Patrol Bomber.

The New York report gives the following estimate of pupil and instructor time to complete a set of 80 different models.

	Average time required	*Total hours*
10 small planes	35 hours each	350
10 medium planes	40 hours each	400
20 large or detailed (having pontoons, etc.)	50 hours each	1,000
18 very large or complicated detail	60 hours each	1,080
22 very difficult	100 hours each	2,200
Total estimated hours per set of 80 planes—		5,030

If it is assumed that at least 10,000 sets or 800,000 models were made the total time would be 50,300,000 hours or 6,287,500 eight-hour days. It requires 27,000,000 man hours to build a 35,000 ton battleship.

Education Values

When the project was first announced, advice was given to the schools that to get the greatest educational benefits, each boy should make a complete plane, and mass production methods should not be used. As time went on the need for larger numbers of model planes became more urgent. Mass production methods were devised and used very effectively.

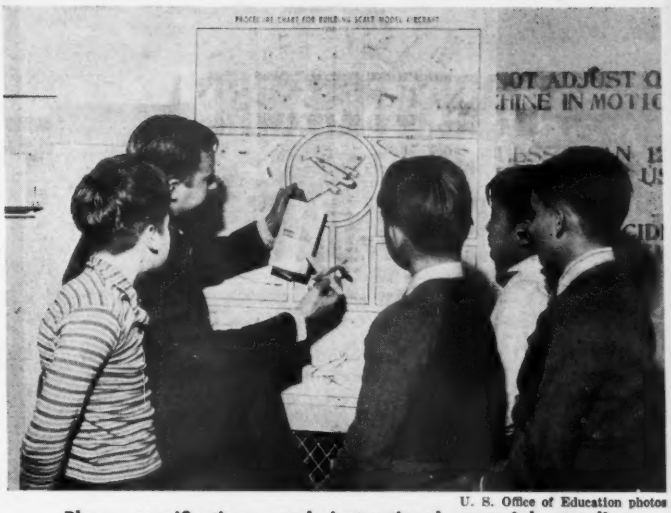
Some instructors organized their production lines so that each student got experience in each step of construction. In some schools organization of the production line was made a responsibility of the class. Shops were organized as factories with supervisors, foremen and workmen. Boys alternated in various positions. Many teachers reached the conclusion that mass production methods yielded educational advantages quite as significant as those attainable with individual production.

Many ingenious devices were developed by instructors. The Model Aircraft Project became the main topic for discussion in many meetings of industrial arts and vocational teachers and supervisors. Oklahoma State College organized a one-semester hour credit course with 15 college students enrolled.

Many cities and states developed instructional materials supplementing those sent out from the U. S. Office of Education. Notable were materials prepared by the Boston schools and the Texas Department of Education. *A Production Plan for the Scale Model Aircraft Project*, published by Bureau of Industrial and Technical Education, New York State Education Department, became almost a universal guide for schools producing models on a mass production basis.

In many schools mechanical-drawing classes were

(Concluded on page 48)



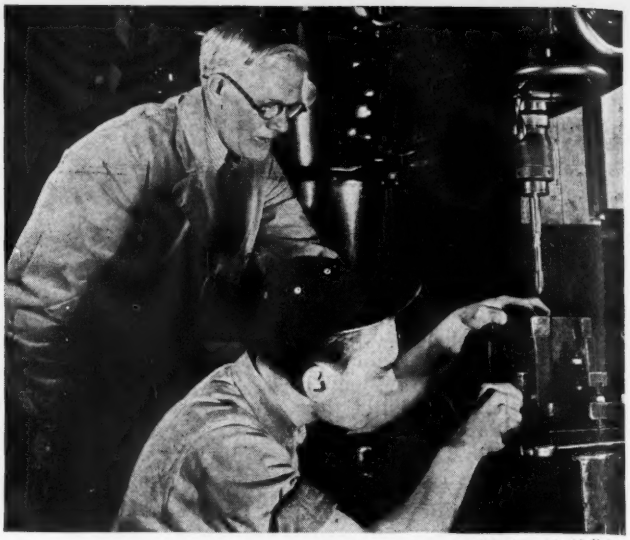
U. S. Office of Education photos

Plans, specifications, and instructional materials totaling more than 850,000 pieces went to 6,000 cooperating schools.

The Phila. inspection committee checks on models. Approval by local committees was required before shipment to Navy.

Both Navy and Army use the model planes in recognition training to avoid serious and often fatal errors in battle.

APPRENTICESHIP AFTER V-DAY



OWI photo by Al Palmer

All-around mechanics needed after the war will be prepared through apprenticeship and vocational training.

WILL apprenticeship after the war be expanded? In what lines? Will it be extended to new fields?

These are some of the questions vocational educators are thinking about. To attempt to answer them fully would take up one AVJournal issue and more. Here, however, are pertinent observations by three men who discussed the future of apprenticeship at the Philadelphia AVA conference.

Demand for Apprentices

"A conservative estimate of the number of apprentices needed in the United States is 619,000," declares Carl S. Coler, chairman, Pennsylvania Apprenticeship Council. "Two hundred thousand youth should be apprenticed each year to provide approximately 105,000 graduates annually.

"In Pennsylvania, 59,000 apprentices are needed to maintain the level of skilled workers and provide a reservoir from which foremen and supervisors may be drawn. Approximately 50 per cent will be needed in manufacturing and service; another 40 per cent will be required in the building trades.

"One hundred twenty different trades are recognized by the Pennsylvania Council. It is expected that a number of new trades will be needed to take care of the postwar demands."

In the Building Trades

William Joshua Barney, chairman, Apprenticeship Committee, Associated General Contractors, points to the difficulty of accurate measures of the needs for apprentices in the building trades. By one measure, including the least favorable factors, there is indicated an over-all shortage of approximately 200,000 men. By a more optimistic estimate there would seem to be an over-all sufficiency of mechanics. The soundness of this latter favorable assumption is decidedly questionable when an analysis is made of the A. F. of L. enrollment for the building trades.

"Many of the present members of various unions were taken in under pressure of war conditions. Many of these will undoubtedly return to their more normal type of employment; others, while fully competent to perform the rougher type of construction so prevalent during the war, are not skilled and competent mechanics for the highly finished construction anticipated in the postwar period. Further, in this enrollment is included a large number of construction mechanics who are engaged in maintenance and similar work and would not be available for new construction. Most important, during the depression and the war there have been comparatively few apprentices in training, especially in the 'general contractor trades.' Consequently, the enrollment in a number of the important trades is composed of older men and the number of these dropping out each year from superannuation and other causes will lessen the available experienced building mechanics by from 5 to 10 per cent per annum."

What Vocational Schools Should Do

In the light of these estimates of the postwar demand for apprentices Arthur B. Wrigley, New Jersey state supervisor of trade and industrial education, makes these recommendations:

Job simplification procedures in industry have made great contributions to war production but these new methods have not reduced the growing need for all-around mechanics. Apprenticeships provide the only means for developing these mechanics.

Apprentice training must be extended in the postwar period to other than the old established skilled trades. It must be expanded for service trades. It must go into technical fields and areas which require at least two years of training.

The modern concept of apprentice training provides for progressive work experiences on the job and organized related instruction in vocational schools. The quality of training on the job by the employer and that carried on in schools will determine the quality of the journeyman mechanic who emerges from the apprentice training period.

State supervisors of trade and industrial education must anticipate a rapid expansion of apprentice training in the postwar period. This training will be the equal responsibility of employers and the vocational schools.

Trade and industrial schools must employ apprentice coordinators if they are to meet the increased demands for apprentice training at the local level in urban areas. They must also provide related instruction for isolated apprentices in the non-urban areas by providing correspondence instruction or itinerant teachers.

These new demands will require the development of organized instruction for many more trades. Curriculum laboratories organized under state departments of education and the U. S. Office of Education are needed to accelerate the preparation and exchange of materials of instruction.

Day vocational schools can help in an expanding program by:

1. Acquainting employers and labor groups with the training facilities available in vocational schools.
2. Providing pre-apprentice training in day schools through established trade courses for which some time may be credited to shorten the periods of apprenticeship.
3. Guiding more day trade school graduates into apprenticeships and describing the advantages of apprenticeship to all secondary school students.
4. Expanding types of day trade school courses so that more qualified youth may be prepared to enter newer types of apprenticable trades.
5. Exploring the possibility of using cooperative training as a means of initiating students into bona fide apprenticeships.

In the bulletin *Apprentice Training for Veterans* recently issued by the Apprentice-Training Service, Federal Security Agency, appears the following list. The length of time is, as far as can be determined, the period customarily required. There are, says the Apprentice-Training Service, variations in views and practices with respect to the term of training.

Trade	Years
Airplane Mechanic	2-4
Artificial-Limb Maker	4
Asbestos Worker	4
Automotive Mechanic	3-4
Baker	3
Barber	3
Book Binder	2-4
Blacksmith	4
Boatbuilder (Small Wooden)	4
Boilermaker	4
Brace Maker, General	4
Brickmason or Bricklayer	3
Business-Machine Mechanic	2
Butcher	3
Cabinetmaker	4
Carman, Railroad	4
Carpenter	4
Carpenter, Ship	4
Cement Finisher	2
Chef or Cook	3
Compositor or Printer	5
Coppersmith	4
Coremaker	4
Cosmetician	2
Dental Technician	3-4
Designer, Die	4
Designer, Tool	4
Diamond Sawyer	2
Diamond Lopper	2
Diamond Brilliandeerer	2
Die Maker	4
Die Sinker	7
Draftsman	3
Dressmaker (Custom)	2
Electrian: Aircraft, Construction, Industrial, Maintenance, Lineman	4-5
Electroplater	3-4
Elevator Mechanic	4
Engineer, Wood Treating	3
Engraver	5
Glass Blower (Non-mechanical)	2-3
Glazier	3
Glove Cutter, Table	3
Goldsmith	4
Instrument Maker	4
Instrument Mechanic	4
Iron Worker, Structural	2
Iron Worker, Ornamental	4
Jeweler	4
Jig Builder	4
Joiner	4
Lather, Metal	2
Lather, Wood	2
Lead Burner	4
Lens Grinder	3-4
Linoleum, Carpet and Soft Tile Layer	3-4
Loom Fixer	3-4
Machinist: Aircraft, Automotive, Marine, Railroad, Shipyard	4
Meat Cutter	3
Mechanic Maintenance	3-4
Millman	3-4
Millwright	4
Model Maker, Jewelry, Aircraft, etc.	4
Molder	4
Mold Maker, Jewelry	4
Motor Repairman, Electric	3-4
Operating and Stationary Eng.	2-4
Painter	3
Paperhanger	3
Patternmaker: Metal-Wood	5
Pipefitter	4-5
Plasterer	3
Plumber	4-5
Pressman, Printing	5
Radio Repair and Service Mech.	2-3
Refrigerator Mechanic	3-4
Rigger	2-3
Sewing Machine Mechanic (Garment Industry)	2-3
Sheet Metal Worker: Aircraft, Automotive, Construction, Industrial	4
Shipfitter	4
Shipwright	4
Ship Loftsman	4
Shipyard Rigger	2-3
Silversmith	4
Silverware Polisher	3-4
Spinner, Metal	3-4
Steamfitter	4-5
Stonemason	3
Stone Setter, Jewelry	3-4
Tailor	4
Terrazzo and Mosaic Worker	3-4
Tile Layer	3
Tool and Die Maker	4
Turner, Roll	4
Upholsterer and Trimmer	3-4
Watchmaker	3-4

Flight Experience

Flight experience to the extent of four hours in a dual-control airplane for each boy and girl in high school aviation classes has been recommended for the consideration of local schools by the State Departments of Education of Wisconsin, Illinois, Colorado, California, Connecticut and Pennsylvania. Each of these states has developed a comprehensive state plan for aviation education for the first twelve grades, and some have also included junior college and college programs.

Have You Read?

How You Can Get a Better Job. Willard K. Lasher and Edward A. Richards. Chicago, Ill.: American Technical Society, 1945. 206 pp. $1.50.

Suggestions to men and women who wish to increase their worth and win advancement.

Vocational Interests and Job Orientation. Harold D. Carter. Stanford University, Calif. Stanford University Press, 1944. 85 pp. $1.50.

A 10-year review bringing together research contributions from scattered sources with suggestions for future research efforts.

HEAR YE! HEAR YE!

Copies of the January and February issues of the American Vocational Journal have been sent to all persons on our *1944* membership lists.

Copies have also been sent to new 1945 members, *not* on the 1944 membership lists, whose names were received in time to be included in the mailings.

Beginning with the March issue, only those 1945 members will receive the Journal whose names were received at the Washington AVA headquarters in time to be included on the mailing list.

From now on during the membership year, names will be added to the mailing list as received. It will not be possible to send back issues since we are now publishing the Journal every month in the year except July and August.

To receive the maximum number of issues during the 1945 membership year, be sure that your name and your dues have been sent to your state vocational association and forwarded to your Washington AVA office. Names cannot be added to the mailing list until they reach the Washington AVA office.

Plan now to put your 1946 membership dues in the hands of your state vocational association secretary by next September or October. That will insure receipt of every 1946 AVJournal issue.

L. H. DENNIS
Executive Secretary

NEWS from City Directors

by Jesse F. Rees

LIKE the first robin in spring the following news is the first of many reports from members of the National Council of Local Administrators of Vocational Education and Practical Arts. Expansion of the *American Vocational Journal* enabled the AVA to open the pages for regular contributions for this group.

Edward Berman, president, director of vocational education, Bayonne, N. J., has asked Jesse F. Rees, secretary, to collect reports from the membership. Mr. Rees is director of vocational education, Harrisburg, Pa. The NCLAVEPA has 240 members on its latest published roster. Its *Letter-O-Gram* will continue to be published as need for it arises. Current news from council members will appear in the *AVJournal*.

Paterson, N. J.: A testimonial dinner was tendered to two outstanding vocational education leaders of New Jersey, Jan. 8; James F. Mason, director of vocational education of Paterson, promoted to assistant superintendent of schools, and Ronald W. Kent, assistant director of the Essex County schools, promoted to the position of director, succeeding Robert O. Beebe, retired. John A. McCarthy, Assistant Commissioner of Education, acted as toastmaster.

Harrisburg, Pa., Aids Military: In order to meet training requirements at the Marietta Holding and Reconsignment Point, the Harrisburg School District placed an experienced conference leader on full time duty at that depot. Since August of last year he has been organizing, supervising and in many cases conducting conferences himself. Prior to that period there was practically no training available for the supervisors of that large depot.

Just recently Harrisburg completed a training program in safety and health for the Mechanicsburg Naval Depot. This course covered 10 sessions of two hours each. Ten different groups representing approximately 200 supervisory personnel participated in the program. As result of this program a large number of unsafe conditions were reported to the safety officials and practically everyone of these was either eliminated or greatly improved. The main purpose of safety and health training programs is to make the personnel safety conscious.

Bayonne, N. J.: As a part of its postwar construction program, Bayonne is planning another vocational and technical education building. This is to be a two story building, 300 feet long, 100 feet wide. It will house an enlarged radio laboratory with a radio tower for broadcasting, an electronics laboratory and steam engineering course equipment. The building's heating plant will be utilized for instruction in power plant operation.

Extensive facilities are being planned for heating and ventilating courses with emphasis on air conditioning, oil burner servicing, automatic stoker servicing, and refrigeration servicing. A large shop, two stories in height will be used for teaching building construction both for instruction in the various trades as well as for training assistants to architects and general contractors. This latter will be on the technical level. Those who expect to go into the distributive phases of construction work will receive instruction in salesmanship.

Jersey City: A new vocational high school to house vocational and technical education activities is scheduled for Jersey City. John Shaver, supervisor of vocational education, Jersey City, is busy drawing plans.

REHABILITATION NEWS

by O. I. Paulson

Puerto Rico Developments: Gloria Antonia Fragoso from Carolina, Puerto Rico, eighth grade graduate of the Puerto Rican Institute for the Blind, and high school graduate of the St. Joseph School for the Blind in New Jersey, and Carlos Pagan from Santurce, are the first two vocational rehabilitation cases to receive college training in the States. Miss Fragoso is studying her first year of college at Setton Hall College. She will specialize in home teaching for the blind. Mr. Pagan is taking his M.A. at Teachers College, Columbia University, specializing in education for the blind. At the University of Puerto Rico, Francisco Cordero Miranda and Jose Antonio Moreno are taking the normal school course to become teachers for the blind.

Alfredo Pineiro from Las Piedras has started his M.A. studies at Massachusetts Institute of Technology in Boston. Mr. Pineiro graduated at the University of Puerto Rico with high honors and was awarded a scholarship to proceed with higher studies.

In accordance with the new plan for vocational rehabilitation in Puerto Rico, and in compliance with the law, cooperative agreements between the State Insurance Fund and the Crippled Children Bureau have been approved. The agreements are designed to effect a more immediate and complete assistance to Puerto Rican workmen and crippled children. Systematic methods of referral have been worked out so that all cases needing vocational training or occupational adjustments are served.

Hauola in Hawaii: Vocational rehabilitation in Hawaii conducts in Honolulu a business school exclusively for young people with physical disabilities such as amputations, weak hearts, arrested tuberculosis and polio. Enrollment averages around 20. Graduates have little or no difficulty in fitting themselves into the business world.

Its name, "Hauola Business College," comes from two Hawaiian words, "Hau" meaning "life," and "ola" meaning "new" — new life. The name is being copyrighted. Graduates receive unique diplomas which have space for such data as speed in shorthand and typing and courses in bookkeeping. In addition, a card is supplied so that the employment record may be kept. The diploma folds into a small leather case with the student's name lettered in gold. These cases are made at the Sheltered Workshop.

Home Sweet Home ... in cans

ON THE front line in Italy an Indiana boy in the snowy Appenine cold, cut open a tin can and shouted; "Oh boy! Fried chicken from Mom!"

In India another Indiana boy received a tin of his favorite preserves. Indiana boys all over the world are receiving presents that most directly connect them with home—home cooked food. The food is coming through in good condition because it is carefully packed in sealed tin cans.

How this happened and what the homemaking teachers of Indiana have done to help families of boys overseas is the subject of a recent report prepared for the AVJournal. It is a record of a unique contribution by vocational home economics to home and family life.

Last fall after the school community canning activities tapered off Indiana patrons began to ask questions. Were there other possibilities for using the new canning methods they had learned? Why couldn't some of the canned food be shipped to men in service? Was there any reason why other foods couldn't be canned in the same kind of tin cans that had been used for fruits, vegetables, and poultry?

Ask the Teacher

Requests came for help in canning everything from chicken - noodle soup for Johnny to fresh roasted nuts for Dr. Smith. Certainly the canning center instructor knew all the answers.

Meeting some requests was a simple matter of searching government and equipment bulletins. Others necessitated dusting off the college chemistry text, contacting friends who were in the "know" on commercial canning procedures. It meant applying knowledge gleaned to trial products.

As teachers searched for answers to new questions they raised questions in their own minds as to the wisdom of such activities. They were keenly aware of the scarcity of tin and shipping space. They knew Uncle Sam was making every effort to see that his men and women in uniform were supplied with good food. But somehow Army and Navy mess just didn't take the place of mother's cooking and special treats from home. Families longed to share their favorite foods with those working and fighting for their safety. That would shrink those intervening miles!

Here was a new contribution to the war effort and a means of helping families retain a bit of the satisfying home life, which is the goal of every homemaking teacher.

Aside from the emotional relief and satisfaction, canning in tin for overseas shipping saved food and precious shipping space. Food saving would be tremendous. Candy, cookies, cake and nuts, often a disappointing molded and soured mass upon arrival at a distant battle zone or camp, could be sealed, processed, and shipped with the assurance they would be edible when received three weeks or three months later.

Mothers and sweethearts wanted help. That was clear. We heard of ham being shipped in glass jars which were broken before leaving the first post office. Some women tried to pack fried chicken in fat in syrup buckets, soldering the lid on before shipping. They sent boiled eggs dipped in paraffin. Obviously the women needed help to do that which they were struggling to do for their loved ones.

Morale Builder

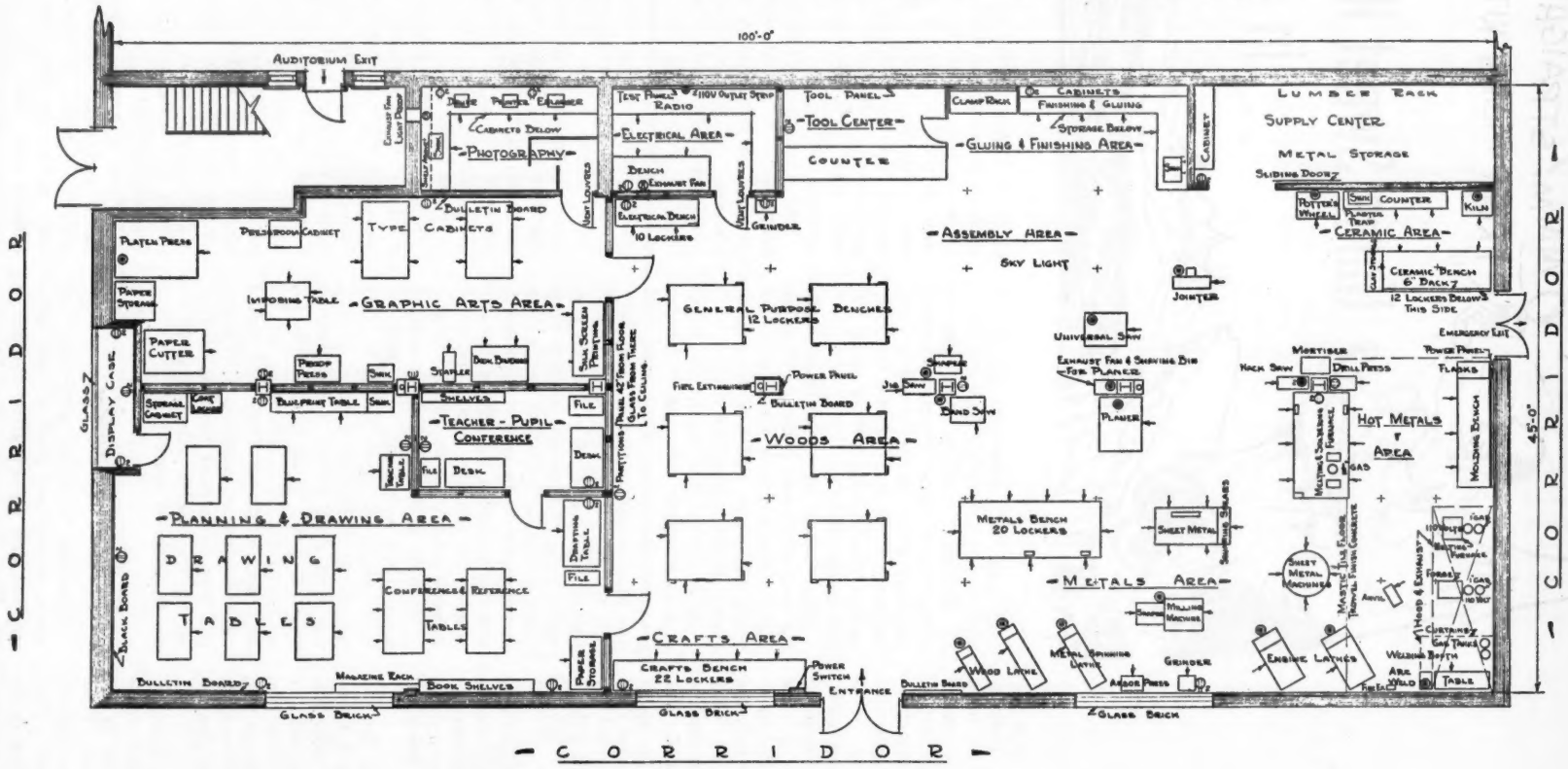
Overseas canning activities are not a recognized part of food production and preservation courses of the Food Production War Training Program. But the equipment supplied for these courses in Indiana is allowed to remain in the community for some time after the end of the approved FPWT course or for the next canning season. So schools opened up their home economics laboratories. Teachers contributed their time in supervising overseas canning.

Some schools have recognized the demand for help with overseas canning as an opportunity to develop interest in preservation of the family food supply and at the same time to help meet an immediate emotional need of women who are bravely keeping up routine home duties and often working a factory shift. Marie Flinn, East Chicago home economics teacher, reports that the East Chicago laboratory is open two nights a week. As many as 200 cans a night are being prepared. Gary schools also offer classes in overseas canning.

Since the war began, time for millions of Americans has been measured by the distance between "mail call" in camp or the postman's regular visit back home. Families continue to send food within the limitation of post office package regulations. Service men and women send food requests which are allowed shipping space. Many reports testify to the value of letters and packages from home on the battle front.

To see a group at work in the home economics laboratory of an Indiana school; to see the "lift" they get by sending food they have cooked and that they can, reveals this homemaking service to be also a home front morale builder.

PLAN FOR AN INDUSTRIAL ARTS LABORATORY



This plan was prepared by C. Merrill Hamilton for the Hugh Morson High School, Raleigh, N. C.; consultant, John R. Ludington, state supervisor of industrial arts.

Specifications: *Lighting*—Fluorescent lights throughout. Spacing and capacities sufficient to furnish 50 foot-candles at bench height. Incandescent lights at machines.

Floors—Mastic tile throughout except in hot metals area, which shall be trowel finish concrete.

Ceiling—To be acoustical material to give an absorption coefficient of 60 per cent or above.

Walls—Shall be finished with a 5 foot wainscot. Walls above of acoustical material.

Partitions—Shall be wood panel, flush on both sides, and up 42 inches from the floor. Double-strength glass will be used from there to the ceiling.

Work Stations are indicated by arrows.

New Metals, Synthetics, and Inventions Set New Goals for Industrial Arts

Redesign for Learning

by **Horace M. Jellison**
Executive Director, Industrial Arts and Vocational Education, Akron, Ohio

WHAT changes should we look forward to in industrial arts after the war? What should the postwar industrial shop look like?

Will industrial arts give the student knowledge of the commodities he will meet later in life? Will it help him develop skill and understanding of the basic tool processes? Will it introduce him to new materials?

To these questions Horace M. Jellison, executive director of industrial arts and vocational education in Akron, Ohio, gave his answers at the Philadelphia AVA meeting:

"The question concerning the type of shop necessary to accomplish these results always brings up the discussion of the general shop versus the unit shop. It is my opinion that the general shop type of activity, particularly in the junior high school, is the type of activity we want.

"The general shop demands more care in planning the development of areas, the types of projects and the training of teachers to do the job. If industrial arts is a study of industry, then our shops should reflect industry. Activities in the general shop in a junior high school should be related to the various types of industries in the community.

"This does not mean, however, that these are the only areas which may be included. Each area should be definitely located and separate from other areas. No area should be allowed to lag. If a teacher lacks specific training in an area, he should be encouraged to acquire training in that area. Or an in-service training program should be set up so that he may get the training needed.

Future for Wood

"The general shop should also reflect postwar needs in terms of materials which may or may not be used in the local community. We may anticipate greater importance of wood in the future. As our iron deposits and oil reserves diminish dangerously, we may be drawing from our forests motor fuels, girders for sky-scrapers, parts for airplanes and many other products now made from metals. The uses to which wood will be put in the future may have no relationship to the things we are doing in the wood shop now. This will mean revolutionary changes in our present shop. Opportunities should be provided for experimentation with these new processes as they become known.

New Products

"New metals and alloys, particularly aluminum and magnesium, should be used in the shop.

"New household appliances should also be included. The home of the future will be almost entirely electrified, so the use and care of household appliances will be important.

"The field of plastics is yet in its infancy, but many things now made from metal will be made from plastics in the future. Many of our present commodities will be made from synthetic materials, with emphasis on the coal, limestone and salt processes.

"Refrigeration and air conditioning, particularly the deep-freeze units used in preservation of foods, will be important. The radios of the future will be far beyond any expectations we have at the present time.

"The new auto engine may be one-tenth the size of our present engine.

"Glass manufacturers are experimenting with new types of glass for the home, which diffuse sunlight and reflect only the ultra-violet rays. They are also experimenting with glass for clothing and as a substitute for other materials. Telephones of the future will be wireless. In the general field of electronics, revolutionary changes will be made.

Urges Visual Aids

"Knowledge of these materials is highly important. The problem of injecting them into the curriculum is equally important. Much of this information can be taught through the wide use of motion pictures and other visual aids. It may be necessary to drop some of our present activities and projects in order to include new curriculum units.

"I have purposely left the field of aeronautics to be dealt with separately. Airplane model building should have a definite place in a junior-high curriculum. A boy may start with rubber-powered models, and later he may make gas-flying models. Principles of aero-dynamics are definitely involved in model making. Upon graduating into the senior high school, a boy might take up glider construction, flying, and if interested, pilot training, which will be offered in many of our senior high schools and universities."

by Tom Diamond

Part-Time Education NEWS

Veterans in the Cleveland Trade School in one of the courses that has high preference among all ex-service men—auto mechanics.

Chicago Provides for Veterans: Philip McNamee, Assistant Superintendent of Schools, reports that Chicago has placed its educational facilities at the disposal of the war veteran. Enrollment of veterans interested in further education, either vocational or professional, has been simplified. A special booklet has been issued setting forth opportunities available to veterans.

A central office has been designated through which all contacts will be made either by the veteran or by the Veterans' Administration. This will eliminate many unnecessary inquiries and assure proper processing of forms.

Chicago will waive payment of tuition fees whenever it will help a veteran to round out his education. Thus if a high school graduate desires to complete a college course, but is entitled to only two years of training under the GI Act he may attend the junior college for two years free. He can then use his veteran benefits for 3rd and 4th years of college.

Veterans now enrolled, Mr. McNamee reports, have average ability, and have adjusted themselves splendidly to class attendance with secondary school pupils. However, some have had difficulty due to a tendency to select courses beyond their educational level.

Kansas Notes: Thanks to Larry Parker, we have discovered the *Vocational Education Newsletter* issued by State Director C. M. Miller. Each *Newsletter* is interesting and timely and well worth the effort one has to expend to induce Larry to mail it to you.

Flora Taylor Young, coordinator-instructor of the cooperative part-time retailing class, East High School, Wichita, sends these testimonials on the value of salesmanship:

"The family of a member of the vocational retail selling class at East High wished to move to Idaho to engage in business but did not want their son to miss the balance of his year's work in retail selling. They requested me to write to Boise and Twin Falls saying they could live in either place and would choose the one that offered salesmanship in the high school. As neither city offered the course, the family moved to Idaho in December and left the son here to finish the semester in Wichita.

"Billy Gene Smith, S-1/C, of last year's class, writes from the Pacific area: 'You might be interested to know that salesmanship is a great asset in this Navy. Anytime you want something and can sell a gold braid on the idea that you need it, you usually get it. I might be worse off in a lot of respects if I hadn't used some of the stuff I learned in your class.' Stuff, he calls it!"

Veteran Education in Kentucky: Charles Crumpton, Kentucky State Board for Vocational Education, has supplied us with some interesting bulletins which convince us that Kentucky is away out in front.

Kentuckians responsible for rehabilitation of war veterans have issued a report on their plans for education on the college level. T. O. Hall, chairman, has published a summary of the report in the December Bulletin issued by the Bureau of School Service, College of Education, University of Kentucky, Lexington, Ky.

Another report in the same bulletin reports training facilities available to veterans in area vocational schools. Kentucky has in actual operation 12 well organized area trade schools.

Approximately 50,000 people are served each year in Kentucky through federally subsidized vocational education. In addition 130,000 have been trained for essential war industries.

Michigan: A. K. Jackson of Newberry in the Upper Peninsula reports a program for training nurses has been organized in cooperation with the Newberry State Hospital. The acute shortage of nurses makes this project quite timely. Mr. Jackson first made a survey of the jobs in the hospital. As a result of the survey, he divided the activities into 17 divisions. Then he analyzed the jobs in each department to determine how many were suitable for student training. He found opportunities for placing 26 trainees. Those concerned may secure information by addressing Mr. Jackson at the high school, Newberry, Michigan.

CIO Toolmakers Union in Detroit is interested in training apprentices. On its staff are a coordinator and an instructor who have the full responsibility for promoting and carrying on the program. George Fern, state director of vocational educa-

tion, assigned a state staff member to work with these men in setting up a course which will include all that the apprentices should learn. Detroit CIO representatives were so impressed with the value of this cooperative effort that they have arranged to have the state representative work with two young men who are likely to be hired as teachers. The question of whether or not they are actually appointed depends almost entirely upon their reaction to the training they are given.

Floyd Allen, principal, Arthur Hill Trade School, Saginaw, submits a most attractive 45 page bulletin setting forth opportunities in part-time classes, evening classes, and veterans' classes. Ex-service men or women who obtain employment can be up-graded through supplementary trade extension courses. Courses may be elected either day or night. Classes conducted in industrial work, distributive occupations, office occupations, and in agricultural work afford a wide range.

Lansing Technical School has been designated as one of the institutions to which veterans may be assigned for training. Special courses have been organized to meet the needs of the returned soldiers. Facilities have been set up for testing as an aid in advising the veterans regarding educational opportunities at other schools, both public and private.

Missouri Looking Forward: The Missouri Vocational Association has a committee working on plans for vocational education in the postwar period. This committee is making studies which, it is hoped, will afford the basis for a bulletin to be published later.

The Kansas City public schools, recognizing the need for curriculum modifying to meet current needs, in December named a special committee on vocational education. This committee will evaluate what is being done in the light of present occupational conditions and recommend changes.

During the present school year the State Department of Trades and Industry has been conducting conferences with the local directors and coordinators. Harry Coxen has been conference leader.

Kansas City reports war training classes holding up quite well. As the demand drops in one field new opportunities for service seem to arise. At present training is being carried on in connection with eight different corporations. The Kansas City part-time program includes, among other activities, training for municipal street car operators and bus drivers. Another type of training being provided is intended for foremen and supervisors employed in the maintenance department of the City Public Service Company.

Nebraska: For some years the State Board for Vocational Education has conducted training of volunteer firemen on an itinerant basis. Joe Fetters served as circuit instructor. Demand has grown. Now Mr. Fetters is a State staff member responsible for supervising the program and preparing course outlines together with teaching content. The first fire engineering training bulletin will soon be published.

"WHEN I GET HOME"

Ingham County Sanatorium prepares women for day when they will resume home duties

"My husband wants me to tell him what color to paint the baby's room."

"Tom says the living room drapes are done for. He says he hasn't the slightest idea what to buy."

"We're going to have a new house when I leave this place and I want to know how to make it easy to work in."

Questions like these are on the minds of women under treatment in Lansing Michigan's Ingham County Hospital for pulmonary tuberculosis. No doubt similar questions—questions about how homes can be kept going during their enforced absence and how to improve them when they return—are in the minds of women in similar hospitals throughout the nation.

That is why what happened at Ingham may suggest ideas for use elsewhere.

Three groups, the State vocational office, Lansing public schools and the Altrusa Club last spring joined forces with the Ingham County Tuberculosis Sanatorium. Their object was to develop a program which would prepare patients to resume home responsibilities when they were discharged.

Ingham accommodates women patients 16 to 70. About 50 patients are at varying states of convalescence at all times. They are on graduated activity—some lying flat at absolute rest; others being allowed to read; others sitting up and able to do hand work.

Only a few could be brought to one place. But fortunately the sanatorium had a public address system which enabled the teacher, Grace B. Rinard, city supervisor of home economics in Lansing Public Schools, to talk simultaneously with all patients who wished to participate and were able to do so. Mrs. Jean Hansen, county rehabilitation director, cooperated in the project.

Miss Rinard first had to find out where the women's interests centered. Following introductions over the radio hookup discussions disclosed a major interest in home decoration. Each patient soon had a unit of her own selection. The Altrusa Club helped to finance necessary mimeograph material and booklets. Materials and pictures were displayed or passed around. Those who could leave their beds met with Miss Rinard in the sunroom. Patients in bed listened with mimeographed illustrations in hand as Miss Rinard and the sunroom group carried on discussions.

From this educational service women patients developed an interest in group discussion, a sensitivity to color, guidance for future home planning, better morale and confidence in their ability to resume home duties when discharged.

INDUSTRIAL EDUCATION NEWS

by Laurence Parker

Michigan: To develop a classroom technique approximating industry, vitalized instruction in day trade machine shop courses has been introduced in local programs. Vehicles of instruction are standard designs for useable tools and machines. Each community selects those articles or operations which it can produce effectively with equipment available. In the making of some complicated articles any one community may work on but one or two of the parts. Sometimes parts go to other communities for completion.

In each local program, students are given enough pieces so that repeated operations foster a high degree of skill. Students start on simple operations and progress to the more difficult. Parts are inspected by a student inspector.

Once the job analysis, course of study and operation instruction sheets have been developed, any type of project can be utilized as a vehicle of instruction without changes being made in the basic course of study or instruction sheets. Students also learn to appreciate the need for accuracy and learn to work in an atmosphere comparable to industry. Variations in the instructional and class organization techniques worked out have been passed on to other communities.

Ohio: Summary of war training up to July, 1944: 394,427 trained in VTWPW programs; 153 different courses in operation during July; 420 training sections were actually "going"; 49 new sections of training started; 49 sections were closed out; 396 training sections of JIT, JMT and JRT conducted by the universities of Akron, Cincinnati and Toledo; 41 local boards of education were operating VTWPW programs.

Seven centers continue to cooperate with ODT and auto dealers to alleviate the shortage of auto repairmen. During July 348 persons completed their training in Cincinnati, Cleveland, Dayton, Marion, Springfield, Tiffin and Toledo; 235 trainees were attending classes. Courses operated include auto mechanics and Diesel.

Tennessee: Vocational and technical school enrollment in the four largest cities is greater by 146 than this time last year. More high school students and their parents are inquiring about training for useful work. New courses and new buildings to house them are being constructed. Old shops are being remodeled. Evening schools are also enjoying increased popularity. Adults realize the need of fortifying themselves against inevitable postwar competition.

Returning veterans are already beginning to request training to enable them to enter a trade and earn a living.

Army emphasis on pre-induction training is sending many boys and girls into our technical schools.

New York: Syracuse: February, 1945, rounded out the first year of the expanded training program of men for the refrigeration industry in this area, Bernard O. Larsen, principal, Apprentice Training School, reports. Classes of 12-15 students were started with successful results; 119 men completed the course; 33 started in business for themselves; 69 received employment either with commercial refrigeration plants or domestic service companies. Carleton J. Kresser gave up his private business to accept an appointment as instructor.

New York City: Enrollment in evening teacher training classes will be approximately 225 distributed over 20 different occupations. High wages paid to skilled mechanics by industry reduced enrollments slightly. Gilbert Weaver, supervisor, says, "Immediately following the cessation of hostilities we should have a large number of high grade applicants for vocational school teaching positions."

Oswego: A special class in boat building is being offered in place of advanced wood shop at the State Teachers College, Gordon O. Wilber, director, industrial arts division, announced recently. It is hoped that students will not only develop the usual skills in advanced woodworking processes, but will also become sufficiently interested in boat building so that they will carry on similar projects with their senior high school students when they assume teaching positions. Several boats of different types will be constructed during 1945 under the supervision of Frank Schneider.

Virginia: The Trade and Industrial Education Division has four men to train school custodians; W. A. Sexton, George E. O'Mara, H. C. Blankenship, M. A. Alvis; two men to train school bus drivers—Raymond Wimbish and J. Milton Shue. Mr. Wimbish and Mr. Shue have compiled a bulletin covering facts every bus driver should know.

C. E. Hedden, conference leader trainer, has conducted several courses at Camp Patrick Henry, Langley Field, and the Port of Embarkation in Newport News. He is now giving similar courses for Army engineers at Port Norfolk.

Kansas: Minnesota, Kentucky, Arkansas, Oklahoma, Missouri and Kansas representatives attended a subregional conference in Kansas City, Mo., Jan. 15-18. N. B. Giles, central regional agent, U. S. Office of Education, was in charge. State directors and supervisors met with Mr. Giles the first day. Local directors joined the group for the next two days; only supervisors met on the last day. Charts and diagrams on postwar trends were studied. Discussions emphasized that Smith-Hughes and George-Deen provisions are broad enough to cover practically any situation which comes up in the training of people along trade and industrial lines. In attendance were: Ark., J. Marion Adams, Roy W. Roberts; D. C., N. B. Giles, R. D. Todd; Kan., C. M. Miller, Laurence Parker, O. H. Beaty, P. W. Chamness, W. F. Currier, L. E. Falgren, J. C. Woodin, Dr. Fowler; Ky., Harold Wilson, Charles R. Crumpton; Minn., Homer J. Smith, S. K. Wick; Mo., Roy Scantlin, G. E. Kohrman, H. T. Ragle, F. G. Jeffrey, Carl W. Brown, O. H. Day, H. W. Dahlor, Henry Coxen, C. L. Wetzel, H. U. Campbell, R. W. Baker, H. H. London, V. L. Pickens; Okla., J. Perry Norris.

The first five evening classes to be reported for 1945 are in Salina, Topeka and Wichita. R. R. Reed reported a class in electronics for air field electricians in Salina; P. B. Graves, Topeka, has started a class in dietetics for nurses; E. L. Meader, Wichita, classes in shop mathematics, punch press operation, and business English.

A class in heat treating, under the supervision of E. J. Chesky, has been completed at Herington Air Field. An interesting folder used on the Independence Adult Evening School Attainment Night, Dec. 20, comes from P. P. Innes, local director.

In Wichita 11,928 people enrolled in vocational evening classes from Sept. 1, 1941, to Dec. 30, 1944; 8,395 completed the work, 2,675 dropped. During the first week in January, 908 people enrolled in War Production Training; 100 in office training and distributive education; 62 in trade and industrial evening classes; 29 in foreman training.

Wisconsin: Racine: Shop classes in the new Racine Vocational School are well under way. The new metal trade department is largest in the state—106 feet long and one story high. One section of the large one-room shop is reserved for aviation instruction. Machine shop activities are well under way. Heat treating equipment and instruction is being arranged for.

Both boys and girls, men and women, may enroll in the aviation division. Equipment includes a full-sized plane, various types of engines and propellers.

facts on YOUNG WORKERS

by Tom Diamond

IN APRIL, 1944, the number of young workers in the United States approached the 3,000,000 mark. Of this number almost 1,000,000 were 14 or 15 years of age.

These figures come from a U. S. Children's Bureau study by Golda C. Stender and Edith S. Gray.

Numbers of young people at work materially increased during the summer, the study states, when farm work was at its height. The July young workers estimate was close to 5,000,000 both in 1943 and 1944.

About half of the 3,000,000 young people were separated from school and were employed full time. A number attended school part-time. Almost 500,000 others were neither in school nor were they at work.

Around 7,000,000 or 78 per cent of the population 14 through 17 were in school in April, 1944. One-fifth of these also hold jobs.

In spite of legislation enacted in most states the following occurred:

High school enrollment decreased by 1,000,000 between 1940 and 1944;

The number of 14 and 15 year olds employed increased four times in the same period to a total of 850,000;

The number of 16-17 year old workers increased three times to a total of almost 2,000,000.

These, and other figures given in the report, are significant to educators interested in part-time education. It may be conceded that efforts of these young people are needed if we are to win the war. But what of the generation growing up without the training the public schools can provide? Shall we be satisfied that, since the condition is believed to be temporary, nothing can be done? Or shall we so enliven our part-time offerings that even the young worker can recognize the relationship between what he can get in school and his future success?

Young Workers in the War-time Labor Market may be secured from the U. S. Department of Labor.

BRONZE BOWL, TWO FEET IN DIAMETER, EXECUTED BY DUDLEY V. TALCOTT, FAMOUS EXPLORER, WRITER AND ARTIST.

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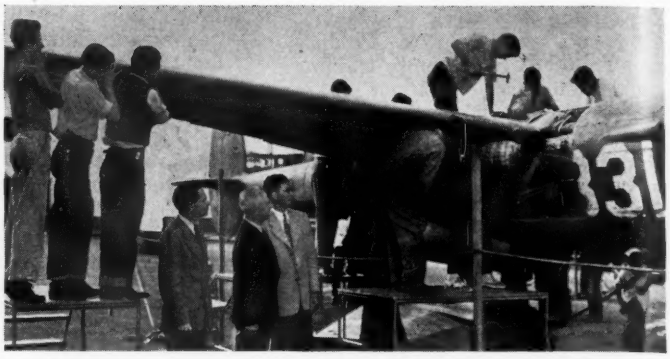
THE INTERNATIONAL STANDARD SINCE 1880

Industrial Arts Course in "General Aviation Mechanics" Wins Wide Acceptance in California

for Air Age fledglings . . .

by Claude E. Nihart,
Director, Vocational and Practical Arts, Los Angeles



P38—one of four airplanes in the Santa Barbara College aircraft workshop. Smallest is a Piper Cub.

AVIATION education in California is developing rapidly in all grade levels and in many subject fields. Even during war times a few high schools are offering flight experience as a necessary part of a course in the science of aeronautics. Giving flight experience necessitates a journey to airfields 150 miles inland in compliance with Army regulations.

Redwood City High School has been a leader in offering an opportunity for flight experience to students enrolled in science-of-aeronautics classes. Many other high schools in the state offer courses in the science of aeronautics without flight experience.

Vocational aircraft mechanics and aircraft engine mechanics courses organized under the California Plan for Vocational Education have been in operation for years in San Francisco, Los Angeles, Bakersfield, Pasadena and other cities.

Model airplane building and flying is a phase of aviation education which has thrived in senior and junior high schools. Auto mechanics shops have broadened their program to include aircraft engines.

However, until recently very little attention has been given to an industrial arts program of aviation mechanics. In May, 1944, at Berkeley, the State Department of Education, with the assistance of the Aviation Education Service of CAA, assembled committees of elementary school, high school and junior college teachers and administrators to develop a suggested program of aviation education for the California schools. Findings of this committee are published in a booklet entitled *Aviation Education in California Public Schools.*

One of the high school committee's recommendations is that a one or two year industrial arts course called "General Aviation Mechanics" be organized on the high school level. Definite suggestions were made as to course content, certification of teachers, and teacher training.

Part of main aeronautics laboratory at Santa Barbara College used by industrial arts teachers in training.

Interest Statewide

All sections of the state, report growing interest in the development of industrial arts aviation courses. In Los Angeles, industrial arts aviation mechanics shops are now in operation at Fremont and Verdugo Hills high schools. Several other schools plan to introduce similar courses just as soon as qualified teachers with the proper certification are available. Aims of industrial arts aviation mechanics, as developed in Los Angeles, are:

1. To develop an active interest in and understanding of the broad field of aviation, with its vocational opportunities.
2. To provide for a practical type of experience in aviation mechanics for all students who are interested in aviation.
3. To give training in the use of tools, materials, and processes peculiar to aviation mechanics.

4. To offer preliminary training for those students who later intend to enroll for approved vocational training courses in aircraft mechanics and aircraft engines.

5. To provide a working knowledge of aviation mechanics for students who expect to fly military, commercial, or private aircraft.

6. To provide experience in aviation mechanics for those students who intend to study aeronautical engineering in technical schools and universities.

Course Aims

Having decided on aims, the next step was to make the course of instruction based upon these aims. A committee of industrial arts supervisors and teachers is now at work. When completed the course will contain these units of experience:

History of aviation, aircraft structure, engines (including propellers), electrical work, hydraulics, instruments, drafting, controls.

Most of the above units will include aircraft nomenclature, technical terms, recognition and use of tools and materials, objective tests, experimentation and shop practice.

One of the most difficult problems facing administrators who wish to develop a course in aviation mechanics is that of securing qualified and properly certificated teachers. Many of the best industrial arts teachers are now in the armed forces and will not be available for some time.

Another problem is certification of teachers. Provisions for granting vocational credentials in aircraft engines and in various fields of aircraft mechanics have been in force for years, but no similar provisions have been made for granting industrial arts credentials. This problem is now receiving State Board of Education consideration. A suitable teacher training program probably will be set up for those who wish to prepare themselves in the industrial arts aviation mechanics field. (The term "Aviation Mechanics" is used for the industrial arts subject offering to distinguish it from the vocational terminology of "Aircraft Mechanics" and "Aircraft Engine Mechanics.") Santa Barbara College, University of California, has well equipped aviation mechanics laboratories and is prepared to train industrial arts teachers.

Delaying Factors

One question often asked is, "Will industrial arts aircraft mechanics become one of our new shop courses on a parity with auto mechanics, machine shop practice, electricity, etc.?" The answer is "Yes." Progress is relatively slow at present due to several factors:

There are few upper grade boys now in high school. Many are working or have joined the armed forces.

No new shop buildings are being built. In order to house the industrial arts aircraft mechanics shop some other shop program must be discontinued, which in many instances is not advisable.

Equipment must be secured from Army and Navy surplus and salvage, which is a complicated procedure. Then, before it is ready for use it must be organized, cleaned, sectioned, and mounted. This takes time and entails a considerable amount of work on the part of the instructor and students.

Qualified certificated teachers are not now available.

These delaying factors, however, are only temporary. The air age is upon us and industrial arts education will keep pace.

What can vocational agriculture do for returning veterans? See "Soldier into Farmer," April AVJournal.

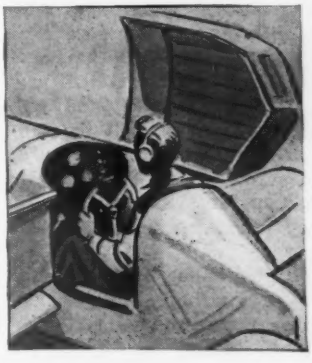
Will man be *ready* for the Air Age?

THAT the Mercator Projection is inadequate for the new concepts of geography is but one indication of the profound adjustments we must make for the Air Age. No invention or industry has ever wrought such far-reaching changes so quickly. Hardly any realm of human relationship or science will be untouched.

Leading educators recognize the urgent need for new education—to fit man for the Air Age. School officials, high school and college faculties are already preparing special studies for American youth, so that it may cope with the problems and opportunities ahead.

Link Aviation has long devoted its engineering research to the educational aspects of flying. The Link Trainer—officially adopted by the Air Forces and the air lines—has been a potent "weapon" in the war. *All* Army, Navy, Marine and air lines pilots receive Link training.

Makers of Link Trainers, Crew Navigation Trainers, Aviation Sextants, Star Globes, Collimators and other devices to teach the principles and techniques of aviation, *our business is to promote safety in flight.*



Link Aviation Devices, Inc.

BINGHAMTON, NEW YORK

Link Manufacturing Co., Ltd., Gananoque, Ont., Canada

Guidance NEWS

By George E. Hutcherson

New York: The Rockland County program, under the able and energetic leadership of Garrett Nyweide, has made great strides in the enlargement of its program. The staff has been increased from 7 to 20; the budget has been increased by more than three fold. The county board now provides the following services in addition to vocational guidance: school nurse, dental hygiene, physical education, music instruction, psychological services and vocational courses. The county is also well advanced in its postwar planning.

Hawaii: The appointment of W. H. Coulter as supervisor of occupational information and guidance service in Hawaii has certainly started the ball rolling in that territory. The quality and quantity of materials prepared for use in schools makes some of us who have been working in this field for years wonder what we have been doing all the while. Mr. Coulter's bulletins to schools are tops in clarity and usefulness to schools. To supplement the bulletins he has also started a newsletter to acquaint schools with progress in local school districts.

West Virginia: Charles P. Harper reports a statewide plan for disseminating information to local high schools on state rehabilitation service available. Field agents will visit all high schools regularly. A regular wartime bulletin will be published bi-monthly and distributed to schools and others. This bulletin contains current information on wartime activities useful to counselors.

Oregon. Guidance institutes for teachers in Sherman, Douglas, and Columbia counties have been conducted by the supervisor, W. D. Purvine. The Sherman county meeting at Moro was a two-day affair. Afternoon meetings were held at Roseburg and St. Helens.

Mr. Purvine also reports that requests were received in his office during the past year from 122 high schools in his state for assistance in improving guidance services. In his spare time Mr. Purvine has done an excellent job of gathering material and editing a newsletter (NAGS) for the state supervisors organization.

Massachusetts: Progress is reported on the state plan for approval of guidance programs by the State Department of Education in local school districts. Many applications have already been received. W. E. Benson reports a special program from Fitchburg which is a worthwhile adaptation of the state plan.

The Boston Public Schools Vocational Guidance Department has prepared an excellent chart summarizing the provisions of state and federal laws as they affect employment of minors.

North Dakota: Stanley Astrom, state supervisor, has sent a copy of his annual report. Any state supervisor who accomplishes the things covered in this report has little time to prepare news items and articles for publications, as for example:

The administration, scoring and interpretation of official tests to 200 high school pupils.

Promotion of testing services in 16 high schools. Tests include intelligence, interest and special aptitude.

In-service training of counselors in McKenzie County.

Conferences with school administrators and teachers in 20 school systems to plan guidance programs.

Work with teacher training institutions on counselor training programs.

New York: Governor Dewey recommends a $2,825,000 veterans aid program to the state legislature. The 12 point program ranges from the establishment of a division of veterans' affairs in the Executive Department at a cost of $300,000 to the setting up of a general counseling service for veterans at the home level, estimated to cost $1,250,000.

Michigan: Carl Horn sets the pace as usual. A week's training program for the new veterans' counselors from 16 communities was held January 8-12. The unique feature of this training program was that it incorporated touring and observation of a veterans' hospital, the Pine Lake Veterans' Vocational-Technical School, Veterans' Administration, two city veterans' counseling centers and provided in addition, a large number of resource people.

A bulletin was issued recently entitled *What Do They Need?* A follow-up study to determine needs of veterans of World War II (OM 2125) which gives a fairly clear picture of the problems encountered by the veterans as they return to their home communities. The study is based on interviews of 500 veterans selected at random and shows that 67 per cent indicate a desire for counsel of various kinds; 60 per cent wish further education or training, most of which would fall in the vocational education field.

Cooperative Counselor Training Advisory Committee made plans for an undergraduate program as well as graduate program during the summer. This program offers the unique opportunity of securing work experience and training in a variety of operations in industry and the retail stores in Detroit. (See page 42).

South Dakota: Lake Preston (South Dakota) high school now has a guidance program. Harold C. Wenberg, superintendent, describes the steps taken following a statewide meeting at which M. J. Emerson, state supervisor of occupational information and guidance, outlined guidance possibilities.

Step No. 1 was an intelligence test for all pupils. No. 2 was a vocational inventory test. Third, the school assembled guidance materials using as its guide *References and Related Information,* U. S. Office of Education vocational bulletin No. 214. Other guidance material is being added constantly. Fourth, materials gathered were cataloged using the dictionary of occupational titles code numbers. Fifth, the actual counseling of students.

They Want to Hear from You

AVA Editorial Board members, acting for their respective fields, gather news for the American Vocational Journal. They work with the editor and managing editor in seeking out and developing articles. They forward suggestions and ideas. They will be glad to hear from you.

SHERMAN DICKINSON, Agriculture
EARL B. WEBB, Business Education
LETITIA WALSH, Home Economics
E. E. ERICSON, Industrial Arts
LAURENCE PARKER, Industrial Education
THOMAS DIAMOND, Part-Time Education
GEORGE E. HUTCHERSON, Vocational Guidance
O. I. PAULSON, Vocational Rehabilitation

For addresses see CONTENTS page.

who's who—and where

F. A. Holmes, Beloit, Wis., has taken charge of the newly organized department of teacher training for trade and industrial education at the University of Wyoming.

Lynn A. Emerson has been named assistant dean, College of Engineering, Cornell University. Dr. Emerson recently chairmanned the working committee of the vocational-technical training study made by U. S. Office of Education.

L. B. Headrick has been appointed director of vocational education evening program at El Dorado, Kans.

C. P. Richardson goes to Honolulu to become director of civilian personnel training for the War Department, Central Pacific Base Headquarters. He was formerly coordinator of war production training at Burbank, Calif.

Herbert Heilig, formerly of Wisconsin, has been appointed professor of industrial education at Colorado State Teachers College.

Arthur F. Hopper, director of industrial arts, Plainfield, N. J., promoted to assistant superintendent of schools, is now acting superintendent of schools.

John E. Whitcraft, formerly professor of business administration and secretarial science, Alfred University, Alfred, N. Y., has just been appointed supervisor of business education in New York State.

C. S. Anderson has joined UNRRA as agricultural rehabilitation specialist. On leave of absence from Pennsylvania State College, he expects to work in the agricultural areas of liberated European countries.

Frances L. Swain, director of household arts, Chicago Public Schools for the past 17 years, retired in January. Miss Swain supervised the homemaking study of 26,000 students in Chicago high schools in the vocational and trade centers in which girls are enrolled and in elementary schools with home mechanics courses. Her successor has not been appointed.

Opal Rhodes, who previously taught home economics education at Teachers College, Columbia University, succeeds Dr. Pauline Sanders at Indiana, Pa., State Teachers College.

Dorothy M. Leahy is the new teacher trainer in charge of home economics education at Florida State College for Women, Tallahassee.

Henrietta Fleck, who recently received her Ph.D. in education from Ohio State University, is now head of the home economics department at Illinois State Normal University, Normal, Ill.

Catherine Campbell is head of teacher training, home economics department, University of Connecticut, Storrs.

Mabel A. Hastie has moved from Cornell University to become head of teacher training at Indiana State Teachers College, Pa. She replaces Marion Wills in this position.

Charles W. Hamilton, assistant in secondary education, Bayonne, N. J., has been assigned to the post of state guidance director for discharged veterans. Mr. Hamilton has invited all New Jersey high school counselors to participate in a series of conferences to be held at the Montclair State Teachers College. Problems in guiding veterans will be discussed. These guidance counselors will then act in their own communities aiding veterans who wish to take advantage of educational benefits under Public Laws 16 and 346.

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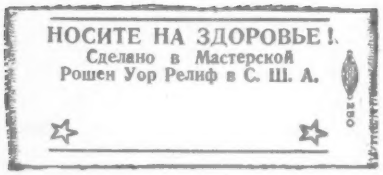

"Wear This in Good Health" says the label sewn in dresses made by homemaking clubs for Russian Relief.

RUSSIAN girls and women left impoverished by the war are now wearing warm woolen skirts made by the Future Homemakers of Alabama, the state organization of vocational home economics high school girls. FHA members, under the supervision of their advisers, have constructed 15,000 skirts from material allotted to Alabama by the Russian War Relief, Inc.

Colorful, four gored skirts were cut at the Julia Tutwiler State Prison for Women at Wetumpka. They were shipped directly from the Montgomery warehouse to 227 vocational home economics departments participating. Future homemakers furnished tape, snaps, thread and sewed the skirts together. Completed skirts were shipped to New York and thence to Russia.

With each skirt goes a card with these words inscribed in English and Russian: "To the heroic people of the Soviet Union from the people of the United States of America." The card also has the name and address and a personal message from the girl who made the skirt. A reply card was attached for the Russian girl who received the skirt to write a note to the Alabama girl who made the skirt.

Russians have a custom of blessing all articles before using them. So to each skirt is attached the blessing, "Wear this in good health," written in Russian.

The FHA executive council, under the leadership of Sylvia Tubbs, president, and Mrs. Elnora G. King, state adviser, adopted the Russian Aid Project as a part of the state program for the year which has as its theme, *Better Future Homemakers—Better World Citizens.* Through this project the Russian women will be better clothed. Alabama girls participating will be rendering a service. International good feeling will be promoted.

Alabama is but one of a number of states whose home economics departments have cooperated. Georgia has sent 20,000 dresses; North Carolina, 15,000; Tennessee, 15,000.

The regional director writes, "The character of the work was excellent, far above anything expected."

Alabama Future Homemakers sew dresses which will be worn in Russia.

Homes First, Montanans Agree

THE home will be the first and most potent factor in the readjustment of every service man and woman to civilian life.

This was one of the major conclusions of a conference assembled by Montana State College Nov. 27-29 on vocational counseling, retraining, placement and rehabilitation of returning service men and women and war workers.

Keynote speaker, A. H. Edgerton, University of Wisconsin, told what the returning veteran and displaced war worker is up against. He suggested a program of action, including vocational counseling. Dr. Dabelstein, U. S. Office of Vocational Rehabilitation, a returned service man now in college, and a British vice-consul also spoke. Factors in adjustments in family living were discussed by Mrs. Edith Harwood, state supervisor of home economics.

Conference representation included: Selective Service, War Manpower Commission, Veterans Administration, State Department of Vocational Education, Department of Public Welfare, Association of School Administrators, Red Cross, Vocational Guidance Association, American Legion, Veterans of Foreign Wars, Farm Security Administration, Federation of Labor and Chamber of Commerce.

Round table and panel discussions in which concrete plans were outlined were held each day. Panel members included representatives of the sponsoring agencies, Extension Service, colleges and high schools. Close cooperation of families, schools, social and employment agencies is the answer to the problem, the conference agreed.

BACK PAPER SALVAGE!

Paper continues to be a scarce article. Your AVA Executive Committee urges that vocational teachers and supervisors everywhere press for greater salvage efforts.

Give wholehearted support to the spring national Boy Scout-General Eisenhower Waste Paper Campaign. Each scout who collects 1,000 pounds of waste paper will receive a special "campaign medal." Each troop which collects the equivalent of 1,000 pounds per boy will receive a World War II shell container with a printed citation from General Eisenhower. Troops or packs should contact local salvage committees.

There is still a very urgent need for pulp wood, especially for coarser types of paper.

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Push Out Walls with FM

(Concluded from page 22)

Receivers and transmitters can be purchased after the war.

Our last "equation" item—receptive listeners—depends on you who establish and program FM stations. That the American public will listen to educational stations we know by the success of the University of Wisconsin's WHA, Michigan State's WKAR, Cleveland's WBOE, State College of Washington's KWSC and many others.

Cost

Any estimates shoot in the dark since equipment companies can at present issue no price lists. However, minimum costs for a low voltage transmitter will be about $7,000; postwar FM-AM home receivers, $50 up.

For More Information

If you want more facts on FM, see *FM For Education,* U. S. Office of Education Miscellany No. 7, 20 cents, Superintendent of Documents, Washington, D. C. In it you will find an explanation of FM, cost data and abundant examples of successful educational programs. You will find the steps to take to acquire an FM station and a facsimile of the construction license request that must be filed with the FCC. For additional advice both on technical and programming problems write to the Radio Service, U. S. Office of Education.

Education FM looms over the postwar horizon. Our people will soon be able to tune in a new kind of radio program service. How much these new stations shall serve the varied needs of vocational education will depend largely on the alertness, vigor and skill of vocational educators. Here is a postwar planning job deserving immediate attention.

What the FM Station Can Mean to Vocational Teachers

Agriculture Teacher: Regular contact with farm families day or night. Opportunities for informal instruction by radio. Program exchange with FFA chapters.

Home Economics Teacher: Opportunity to talk regularly to families served. Means of giving instruction in better home making practices; child care, nutrition, consumer education, conservation. Closer relations between students and the home.

Trade and Industry Teacher: Trade extension instruction for special groups such as labor organizations, technicians and employees. Adult education services. Publicity for courses available. Practical experience for students in radio station and set operation and maintenance.

Business Education Teacher: Opportunities to publicize services. Refresher courses by radio in stenography and business skills. Uniform testing techniques.

Guidance Counselors: Opportunity to bring the home into the guidance process. Information on job and guidance services to adults. Transmittal of advice of business, labor, government leaders to youth in many schools at the same time.

Rehabilitation: Instruction for individuals physically unable to come to classrooms. Publicity for rehabilitation services. Related general education at convenient times.

Industrial Arts: Opportunity to serve adult interests.

For all Vocational Teachers: Opportunities to maintain closer relations with families in school service area. Frequent air contact with vocational teachers and students. Widespread publicity for services vocational education offers. The chance to take learning to people where they live.

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The Department Store is Their Classroom

OHIO HIGH SCHOOL SENIORS PREPARE FOR MERCHANDIZING CAREERS IN CO-OP PROGRAMS

by Helen Hickman

Graduation class at the May Co., Cleveland. All are high school seniors who have been enrolled in the distributive education co-op program.

Downtown department stores in three Ohio cities have become schools for high school seniors who are preparing for careers in merchandising.

How is this experiment working out? Helen Hickman, area-coordinator of distributive education, Cincinnati, Ohio, tells us in a report to the AVJournal.

Cleveland originated the plan in 1941. Two department stores agreed to employ 30 cooperative students on a half-day basis. The stores provided classrooms; the Board of Education employed teacher-coordinators. Selected twelfth-grade students spent the morning four hours in the store classroom. After lunch they reported for work in some part of the store.

All students returned to their parent high schools for graduation.

Students and store executives welcome this program with such enthusiasm that it has been steadily expanded.

Three department stores now employ approximately 100 co-ops. The Board of Education building in downtown Cleveland houses the classes in order that teaching may be more specialized and administration may function easily. Frequently the teacher - coordinators take the students to the store for planned meetings in merchandise study.

Dayton and Cincinnati have adopted the Cleveland plan during the current school year. In Cincinnati two department stores provide classrooms and assist in training selected co-ops. In one store students rotate through general office procedures as well as through selling departments. They learn sorting, billing, inventory procedures and comptometer operation.

The second store supplements experience in selling with directed observation and training in non-selling departments such as interior and window display, advertising, adjustments and delivery. The entire class participates in this assignment. Classroom instruction is correlated.

Separation of the student from his high school associates and activities during his senior year is the one drawback. Student activities must be planned by the teacher-coordinator. In all cities the stores have aided by arranging special luncheons and dinners. Students also return to their parent schools for important assembly programs.

Transition from school to full-time employment becomes an easy adjustment following this year of specialized study and directed work experience. The student gains a broad background of training for department store occupations for which he is best suited. He has confidence because he knows that management observes his progress and will place him in an advantageous position following completion of training.

AGRICULTURAL EDUCATION NEWS

by Sherman Dickinson

Montana: Five Canadian school officials recently made a study of vocational agricultural instruction and FFA activities in Montana. They visited student farm programs, farm shops and classrooms and were guests of the vocational agriculture instructors meeting at Kalispell.

Michigan: Nearly 9 out of 10 laymen engaged to teach farm mechanics in the Rural War Production Worker Program had never taught before. Seven out of 10 farmers teaching commodity courses also had no previous teaching experience. To aid them, three hour training conferences were organized in several different regions. Members of the State Board for Vocational Education and Michigan State College representatives and 105 special teachers took part.

In four Soil and Water Conservation workshops Dec. 20-30, 35 vocational agriculture instructors studied problems of erosion control, drainage, fertilization practices, soil testing and recommendations for developing sound soil programs.

Missouri: From time of June opening to December, 128 school canneries enabled patrons to can 2,200,000 pint-equivalents of food.

Illinois: H. M. Hamlin co-authors a new 38 page bulletin which should be read by all persons interested in vocational education in agriculture. *The Place of Agriculture in the Secondary School Program* was written with Charles W. Sanford of the University of Illinois, College of Education. They discuss difficulties in adjusting agriculture to secondary schools, promising new developments, and suggest a program for the future. This is *University of Illinois Bulletin, Volume 41, Number 12.*

home economics NEWS

by Letitia Walsh,
Editorial Board Member for Home Economics

HOME economics news letters from various states report fresh and promising ideas for pupil motivation:

One teacher reports that she keeps a scrap book of ideas for home experiences to which her classes also contribute. In the book are pasted stimulating pictures, questions, magazine articles, bulletins, and cartoons. The interest in putting up good bulletin boards increased when the instructor formed the habit of taking a picture of particularly effective arrangements.

Seventh and eighth grade girls were delighted with a club that could be called "Stitch and Stir."

A high school home economics club meets in pupils' homes one evening each month, and thus secures practice in home entertaining and variety for club meetings.

Planning the year's goals in third year home economics became much more meaningful when the tentative proposals were checked against the practical needs of young matrons who returned to their high school to discuss homemaking demands and rewards.

Brightening Up

Interest in brightening their "school home" appears in many reports.

In one high school three classes took responsibility for improving one room in the home economics cottage. The second year class washed the walls and ceiling of the foods laboratory; the first year class washed windows, shades, and woodwork in the clothing room, and put down linoleum; third year pupils and the teacher spent one school day repapering the living-room and bedroom.

One school earned the money for similar refurnishing by preparing and serving a series of faculty luncheons as part of their meal management study. One girl put her new knowledge of slipcovering to good but unexpected use. She bought suitable material and heavy twill tape and from the old pattern made smart new seat covers for the family car.

Considerable "missionary zeal" for interesting others in improving their eating habits was reported. One class studying nutrition made a thorough survey of fellow students' diets, and put on a campaign to interest all in the most urgent changes.

Another class presented an assembly skit on converting father to a desirable diet, in spite of trials and tribulations.

A home economics club determined to improve standards of refreshments served at school dances. They bought a punch bowl for the student body, then sponsored a dance and demonstrated service.

Progress Checks

Pupils' management of time when working alone and when working with others receives attention.

In a clothing class each girl wrote her goal for the lesson's accomplishments on a blackboard chart which gave the pupils a chance to compare notes. Once a week each girl analyzed and recorded her anticipated progress for another week. At the close of class work, the teacher would use a few minutes occasionally to evaluate progress with the pupils. After pupils had made and used time schedules for preparing meals at school, they made schedules for meals they could serve at home on Saturdays, including tasks with which other members of the family could help them.

One school rented a frozen foods locker for their use, and analyzed the time and money management involved in its effective utilization throughout the year.

Earning Power

Earning money has real appeal. A pupil in first year homemaking gained enough skill to earn $15 by making clothing for a neighbor's child.

In 19 representative programs, involving 640 pupils, girls reported earning through use of the skills learned in homemaking: caring for children, $2,491.50; making slip covers, $418.20; caring for the sick, $783.14; assisting with banquets, baking, making candy, canning, $3,657.83; making and mending garments, $1,130.21; raising poultry, gardening, clerking, housecleaning, $9,606.17.

Boys, too, are interested in many aspects of home economics.

Two clubs, one for boys and one for girls not regularly enrolled in homemaking classes, meet once a week during a regular school hour to study everyday living problems.

To complete a study on housing, second year homemaking pupils went into the industrial arts department to refinish and upholster furniture. The boys in the industrial arts class spent the time studying home living problems.

Boys in agriculture classes and girls in homemaking classes in still another high school together canned 1,085 No. 2 cans of surplus peaches and 5,384 No. 2 cans of apple sauce for their school lunchroom.

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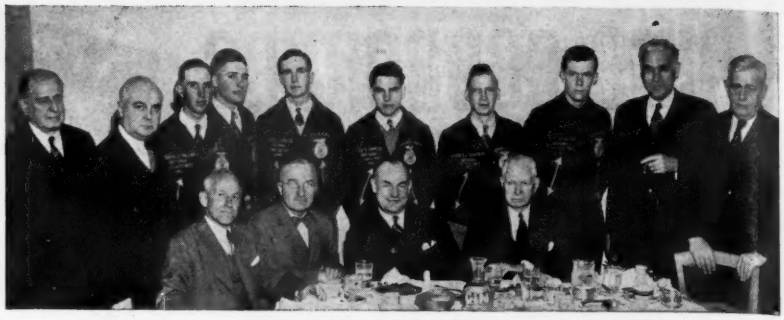
EDAGRAM

IT is imperative that something be done immediately to delimit and stabilize the responsibilities of the teacher of vocational agriculture. The possible area of service is so vast that aggressive and sincere teachers burn themselves out or become discouraged and leave the profession, while other teachers may stress the relatively unimportant activities. Some teachers try to do it all and consequently do nothing well and are dissatisfied. Supervisors and teacher trainers are largely to blame for this unsatisfactory situation. They, in cooperation with leaders among the teachers, must remedy the difficulty or serious trouble will develop. This is an emergency.

Sherman Dickinson,
University of Missouri



Guests of Senator Elmer Thomas of Oklahoma at the U. S. Capitol were these FFA national officers: Seated l. to r.: Sen. Millard E. Tydings (Md.); Vice President Harry S. Truman; Claude R. Wickard, Secretary of Agriculture; Sen. Elmer Thomas (Okla.). Standing l. to r.: Sen. George L. Radcliffe (Md.); Sen. Abe Murdock (Utah); Merrill J. Hallam, 3rd V. P. (Utah); George C. Fry, Student Secretary (Md.); Oliver H. Kinzie, President (Okla.); David B. Jameson, 2nd V. P. (Pa.); Sigvald J. Sandberg, 1st V. P. (Minn.); Tom Vaughan, 4th V. P. (Tenn.); Sen. Henrik Shipstead (Minn.); and Sen. Tom Stewart (Tenn.).

While in Washington they visited the National FFA Camp near Mount Vernon. In the evening they were dinner guests of Wheeler McMillan, editor of the *Farm Journal*. Later in the week they were entertained by the National Grange at the Brookings Institution, Grange Master Albert S. Goss acting as host. In between these festivities they were in session at the U.S. Office of Education transacting important FFA business.

Buying is our Bootstrap

(Concluded from page 19)

extent dependent upon what retail labor costs are going to be. If excessive, self-service will remain at widespread high levels and may even see greater growth.

House to house selling will probably continue in the postwar period much as it was carried on in the prewar period as an important form of distribution for certain specialities characterized by novelty, demonstration quality and relatively high margins to cover the necessary costs of direct to consumer selling.

Consumer credit, now drastically limited by Regulation W, will need liberalization.

Auto, tire and automotive equipment stores are, for reasons that are obvious, due to enjoy an enormous postwar boom. We shall also probably soon see airplane agencies and stores.

Furniture, appliance, hardware and other durable goods dealers face the largest demands for their goods that they have ever seen.

Restaurants may slump temporarily after the war industries come to an end, after the women war workers go back home and rationing is ended. In the long run, however, restaurants and the service of ready prepared food on the premises are likely to expand indefinitely.

Consumer cooperatives, which for more than 100 years have been at the bottom in importance on the list of American distributive institutions, have recently shown some very active signs of progress. Since the late 1930's up to the war, they enjoyed the phenomenal growth of more than doubling their sales. Consumers' cooperation is to some extent favored by economic adversity. If prosperity can be achieved in the postwar period, it seems unlikely that consumers' cooperatives will show any gains in excess of other channels of trade. If, on the other hand there is a slump with widespread unemployment, consumers' cooperatives are likely to spread rapidly.

Many changes in products, packaging and services are undoubtedly on the way to postwar markets. It seems probable that consumers will be offered a much wider variety of fresh fruits and vegetables from all parts of the world, some transported by plane.

Advertising, both national and local, by newspaper, rádio and other media, is certain to grow increasingly important.

Market research, already well established in some companies, is certain to be applied even more extensively. Wasteful hit-or-miss methods of marketing goods followed in the past will certainly give way to methods and procedures whose effectiveness and results have been predetermined.

Other important but general changes in consumer demand may be safely forecast. Most consumers will want better quality goods than have been available under war conditions. Wartime victory models and make-shift substitutes will be a drug on the market. Consumers will want and expect more variation and greater ranges of qualities, colors, sizes and prices than have been available in the past.

The Last Word

"Evangeline Parish schools," declares the Louisiana State Board of Health *Newsletter*, "are doing one of the most heartening pieces of health work yet seen. They have constructed model slaughter houses, curing plants, canning demonstration rooms. It seems to be the last word in functional wartime health work."

Business Education NEWS

by Earl B. Webb

Model stores in schools help Washington state distributive educators to make training realistic.

South Dakota: R. H. Noll, state supervisor of distributive education, writes enthusiastically of the cooperative part-time programs in retailing. "The total enrollment for seven cooperative part-time programs for 1943-44 was 107 students as compared to 84 in the five programs for 1942-43. Students averaged over 24 hours per week in stores. Wages increased from 22.23 cents per hour average in 1942-43 to 25.73 cents in 1943-44. Total earnings rose from $16,504.94 for 1942-43 to $22,742.60 for 1943-44. Reason: 24 more students in 1943-44 and wages increases."

Kansas: Several states are now issuing special bulletins or handbooks on distributive education for the interest, information and use of school administrative personnel. One among these is that prepared by Warren G. Meyer of Kansas. "Sixty-one pages of useful information comprise the *Handbook on Distributive Education for Instructors and Coordinators.* Contents: A description of distributive education; types of classes; businesses that may apply for training; subjects that may be developed; cooperative part-time classes and advantages of this type of training to the business firm, to the school, to the community and to the student. Sections are devoted to kinds of classes for distributive workers which Kansas intends to aid from Federal funds; promotion and initiation; the community survey; advisory committees; coordination; selecting trainees; the training station; sample outlines of cooperative retailing classes; related subjects period, and methods of instruction."

Georgia: W. J. Wommack, state supervisor of distributive education for Georgia, has modified somewhat the intent of such a handbook to reach high school students interested in entering upon and training for the field of retailing. Brief statements describe the future in this field, who are eligible for training, and why one should take store training. A typical course schedule is outlined.

Mr. Wommack has persuasively stated on subsequent pages of this handbook the reasons why one should choose retailing as a career, the house of employment, rates of pay and eventual opportunities for advancement on the job. The detailed description of student responsibilities that must be accepted upon entering such cooperative school and work programs is unique. The pamphlet closes with a statement showing how one may enroll for such training.

New Jersey: A timely course in "Routeman-Customer Relations" has been added recently to make laundry routemen alert to acute customer relations especially as they apply to handling customers after the war. Special innovations in teaching technique have been adopted to motivate the group, arouse enthusiasm, and focus attention on high points.

Mr. Lloyd Jacobs, state supervisor of distributive education, has provided for substantial follow-through of this highly specialized training in the use of summary cards emphasizing the major points of the course. The course is offered by the Vocational Division of the New Jersey Department of Public Instruction in cooperation with the New Jersey Laundryowners Association.

FOR TEACHERS OF DISTRIBUTIVE EDUCATION

RETAILING —
Principles and Practices of Retail Organization, Buying, Advertising, Selling, and Management
By G. HENRY RICHERT

Deals with retail selling and store operation in both large and small stores. Contains layouts for various kinds of stores. Emphasizes marketing structure, buying, selling, pricing, stock controls, display, advertising, customer types, fashion influences, personnel, finance and accounting, and credits. A separate workbook and outside tests are available.

List Price, $1.72

DISTRIBUTIVE EDUCATION —
Organization, Content, and Procedures
By KENNETH B. HAAS

The purpose of this unusual volume is to facilitate organized instruction and to promote efficient training in distributive education. It contains procedures for the organization of classes, teaching material, and guidance for training teachers. It is a book that should be of major interest to teachers, supervisors, and directors of distributive education.

List Price, $2.00

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NEW TEACHING AIDS

Know Their New Skills

Army and Navy officers who are in a position to know say that one of the major problems which will confront educators after the war will be knowledge of Army and Navy job language. It will be difficult to advise a soldier or a sailor unless one knows what was involved in the particular war jobs that the service man engaged in. How difficult it will be is indicated by the fact that one man recently discharged had worked at 35 different Army jobs. Unless civilians show some understanding of Army and Navy jobs and how that experience can be converted to peacetime work, serious errors will be made, and confidence will be lost.

Therefore educators and guidance officers in particular should be especially interested in two new Government publications now available: *Special Aids for Placing Military Personnel in Civilian Jobs (Enlisted Army Personnel)* and *Special Aids for Placing Military Personnel in Civilian Jobs (Enlisted Navy Personnel).*

The first volume covering 400 pages can be secured from the Superintendent of Documents for $1.00; the second for 30 cents. Each volume describes military personnel jobs, and long lists of related civilian occupations, additional training required, physical activities involved, and working conditions.

BOOKS

Aircraft Mechanics Handbook. Peoria, Ill.: The Manual Arts Press, 1944. 391 pp. $2.75.

A guide and reference for apprentices, students, repair mechanics, factory workers, and engineers. Based on latest Army-Navy and commercial specifications.

Manual of Machine Shop Practice. Otis Benedict, Jr. New York: McGraw-Hill Book Company, 1944. 249 pp. $1.75.

For the student in engineering shop practice. Written by the assistant professor, Department of Shop Practice, Pratt Institute, Brooklyn, N. Y.

An Analysis of the Work of General Clerical Employees. Thelma M. Potter. New York: Bureau of Publications, Teachers College, Columbia University, 1944. 100 pp. $1.85.

Study made under supervision of Prof. Hamden L. Forkner, Columbia University. Suggestions for secondary school training for general workers based on study in five types of positions.

Introduction to Naval Architecture. John P. Comstock. New York: Simmons-Boardman Publishing Company, 1942, 1944. 209 pp. $4.

Substantially the theoretical naval architecture course given to the hull drawing apprentices at the shipyard of the Newport News Shipbuilding and Dry Dock Company. A study book for a high school graduate.

Encyclopedia for Boys and Girls. S. Johnson. New York: Philosophical Library, 1944. 396 pp. $3.

Answers to 10,000 questions. An encyclopedia to introduce boys and girls to the use of encyclopedias as much as it is a handy reference book.

PAMPHLETS

Occupational Abstracts. Occupational Index, Inc. New York: 1944. No. 74, Television; No. 75, Public Health Nursing; No. 76, Book Illustration; No. 78, Real Estate. Single copies 25 cents.

Condensed two-fold leaflets summarizing valuable literature; brief bibliographies.

UNRRA (United Nations Relief and Rehabilitation Administration) has developed literature describing its aims and activities. A letter to UNRRA, Washington, D. C. will bring you without charge *UNRRA, Organization, Aims, Progress; Selected Reading List on United Nations Relief and Rehabilitation Administration;* and *A Program on United Nations Relief and Rehabilitation,* which summarizes a one day conference at which experts described the work going forward throughout the world.

Employment Opportunities in Characteristic Industrial Occupations of Women. Elisabeth D. Benham. Women's Bureau, U. S. Department of Labor, Washington, D.C.: Superintendent of Documents, 1944. 50 pp. 10 cents.

Reports the rise of employment of women in numerous industrial fields.

Tax Legislation Affecting School Revenues, 1939-1943. National Education Association, Washington, D. C.: 1944. 41 pp. Single copies 25 cents.

Reports what happened to state taxation programs in the war period. Supplement to reports for 1929-1933 and 1934-1938.

RADIO

NBC University of the Air Handbooks:

We Came This Way (history); *The World's Great Novels; Music of the New World* (Folkways in Music, Music in American Cities); *Lands of the Free* (Development of Ideas in the Americas); *American Story* (Good Neighbors on the Air). National Broadcasting Company. New York City: 25 cents each.

These handbooks are useful in conjunction with NBC University of the Air Broadcasts. They suggest supplementary reading and contain comprehensive bibliographies.

Home Is What You Make It, NBC, Saturdays, 9:00 a.m., EWT. The NBC University of the Air home economics series. Prominent home economists are guests. Write for the listeners' handbook which includes family relations, housing, food, clothing, family health, etc.

The Voice of Authority. Six tran-

scribed four-minute interviews may be used in the classroom or on radio programs. Subjects: National Nutrition Program, Industry Feeding, School Lunches, Enriched White Flour, Wartime Eating, The Why of Food Surpluses. Scripts available in 12-inch 78 RPM recordings. Address inquiries to Marketing Report Division, Office of Distribution, War Food Administration, Washington 25, D. C.

EQUIPMENT

Ellis-Lawyer Tool Company, 1001 South Fremont Avenue, Alhambra, Calif., announces the Ellis improved double-swivel dividing head. Improvements include: extra blank index plate which may be drilled for special operations, ground worm, holddown bolts; overall construction made sturdier for extremely close tolerance work.

X-Acto Crescent Products Co., 440 4th Ave., New York 16, N. Y., announces the availability of four books: *Twelve Technics For The Artist, Student and Teacher, The Commercial Artists' X-Acto Handbook, How To Build Scale Model War Planes,* and *The Whittler's and Woodcrafter's X-Acto Handbook.* Copies will be sent without cost to qualified vocational teachers.

FILMS AND FILM STRIPS

YMCA Motion Picture Bureau, 347 Madison Avenue, New York 17, N. Y.: A number of films of interest to vocational teachers, especially in the fields of commercial education, industrial education, and guidance will be found in the 104-page free catalog of 16mm. sound and silent motion pictures available on rental basis.

Princeton Film Center, Princeton, N. J. 1945 catalog just released lists films useful in teaching safety, health, chemistry, physics, social studies and other general topics. Each subject is fully described on a separate colored, illustrated page so arranged that pages may be used for classroom discussion.

Society for Visual Education, 100 East Ohio Street, Chicago, Ill. The new pictorial catalog lists many new slidefilms including *Origin and Basic Definitions of Algebra* (two slidefilms); *Mathematical Instruments* (four slidefilms); *Theory of Flight* (four slidefilms). SVE also has *Air Transportation . . . Jobs and You,* second in a series of slidefilms presented by United Air Lines. Explains various jobs in air transportation.

Vocational Guidance Films, Inc., 2708 Beaver Avenue, Des Moines 10, Iowa. 35 mm. filmstrips and 16 mm. sound films are described in new catalogs and leaflets published by this company. The catalog lists 20 filmstrips, *Your Life Work,* series prepared by Walter F. Greenleaf and Franklin R. Zeran.

British Information Services, 30 Rockefeller Plaza, New York 20, N. Y. New catalog lists films produced in British Commonwealth of Nations. Of particular interest to agricultural education teachers are four films on *The Farmer's Year,* showing life on British farms in four seasons.

Office of War Information, Bureau of Motion Pictures, Washington 25, D. C. 1944-45 catalog lists numerous Government-sponsored films together with distribution offices in the various states.

Take Time to Make Time. 35 mm. film strip. Household Finance Corporation, 919 North Michigan Ave., Chicago, Ill. Free.

The pictures and the script that accompanies the film show how to help apply job analysis to home tasks. The Corporation's *Time Management* bulletin provides study material for students to parallel the use of the film.

Agriculture teacher-trainers and supervisors from 35 states are in this photograph taken at AVA Philadelphia conference luncheon given for them by the Great Atlantic and Pacific Tea Company.

State Supervision for Industrial Arts

By Roy G. Fales
Supervisor for Industrial Arts
New York State Education Department

INCREASING recognition of industrial and practical arts work as one of the fundamentals in education today is leading to the development of leadership in this field. If industrial arts work is to take its place in education a strong body of state and national leaders must be developed. State supervisory positions should be created in which they can exercise leadership. Otherwise the best industrial arts teachers will continue to seek professional growth and opportunity in general and vocational education, leaving industrial arts to drift along without sufficient leadership.

In the states where a supervisor of industrial arts work has been appointed in the state education department, it has been possible to formulate a strong program. State leadership can gradually unify the purposes, interests and practices of the teachers of industrial arts, most of whom normally have little contact with their fellow teachers of the same subject. It can also lead to development of common objectives and clearer definitions of the subject matter to be covered. State supervision can work for types of shops needed and also for development of teacher training facilities.

A state-wide, and indeed a country-wide, uniformity of purposes and practices is needed if industrial arts work is to take its place as a part of general education and as the foundation for vocational education. Sweeping changes require professional guidance. Woodworking as the predominant type of industrial arts work is rapidly giving way to a period in which all major industries are being presented to school pupils in order that they may understand the physical environment in which they live and the opportunities for life careers. How shall state education departments promote orderly progress in this process?

Early in the twentieth century a supervisor of manual training and subsequently industrial arts was appointed in New Jersey on a permanent basis. This position has been held by Robert A. Campbell for more than 20 years.

In New York Royal Bailey Farnum was appointed as supervisor of drawing and industrial training in 1910. The position of supervisor of industrial arts work grew out of this appointment. It has continued as a permanent position.

About two years ago Connecticut appointed John Thorp as a half-time supervisor of industrial arts. The other half of his time is spent in supervision of general subjects.

In many states vocational directors are in charge of industrial arts work and in others there is no state leadership as yet in this field.

The roster of individuals appointed for state supervision of industrial arts work in the country has increased rapidly within the last year and a half:

Connecticut: John Thorp, supervisor of industrial arts, State Education Department, Hartford, Conn.

Indiana: Sylvan A. Yager, supervisor of industrial arts—teacher training, State Teachers College, Terre Haute, Ind.; Fred Schmidt, supervisor of industrial arts, Ball State Teachers College, Muncie, Ind.

Louisiana: Ralph W. Bowers, assistant supervisor of technical and industrial education in charge of industrial arts, State Education Department, Baton Rouge, La.

Missouri: Doyle Kemper, supervisor of industrial arts education, Department of Public Schools, Jefferson, Mo.

New Jersey: Robert A. Campbell, supervisor of industrial education, State Department of Public Instruction, Trenton, N. J.

New York: Roy G. Fales, supervisor of industrial arts; Arthur F. Ahr, supervisor of industrial arts, State Education Department, Albany, N. Y.

North Carolina: John R. Ludington, state supervisor of industrial arts, Raleigh, N. C.

The Air Fleet

(Concluded from page 25)

given responsibility for reproducing model planes. Sheet metal classes often made permanent templates of sheet metal. Physics classes studied models from the aeronautics standpoint. Art classes assisted in painting models and in some cases painted rejected planes in war colors for local display.

To Other Countries

Shortly after the project was started a request came from Canada for samples of our instructional materials. These were supplied. Not long after Canadian schools were making model planes for the Royal Canadian Air Force.

The Inter-American Escadrille, an organization for unifying aviation groups in American countries, with the cooperation of the Office of the Coordinator of Inter-American Affairs and education ministers in Latin-American countries, established model plane building projects in Ecuador, Guatemala, Chile, Colombia, Peru, Uruguay, and Brazil. Plans and specifications used in our project were translated into Spanish and Portuguese.

For the Record

Several official sets of the 80 different model planes were made for permanent display and as a permanent record. One of these sets is deposited with the Navy Bureau of Aeronautics; the other, consisting of at least one model plane from each state and territory, can be found in the office of the director of the Model Aircraft Project, J. C. Wright, Assistant U. S. Commissioner for Vocational Education. Similar official sets were placed in state historical museums. Sets of the plans, specifications, and other materials used in the project have been placed in the Library of Congress and in the National Archives.

To students, teachers and local committee members Rear Admiral D. C. Ramsey, chief, Bureau of Aeronautics, gives this accolade: "You are helping our fighting men learn to recognize the scores of enemy planes they may face in battle. The proven value of your work has inspired the boys and girls of Canada and Latin America to follow your fine example. The Navy is proud of your accomplishments and extends sincere thanks to all of you for your patriotic contributions."

Here and There ...in vocational education

For Better Illinois Teachers

What should be done to improve teacher training so that graduates will be able to render maximum service? This question was the subject of a recent two day session at the University of Illinois. Attending were 65 classroom teachers, principals, superintendents and state department representatives. In general sessions and in smaller groups these guests met with University teacher training committees.

They had before them criticisms of tentative teacher training curricula. These had been solicited from 25 to 100 teachers in each field. Discussions were frank, fearless and professional.

Here are the recommendations made by the conference:

For the undergraduate curriculum in home economics: (1) more mental hygiene and more adolescent psychology, (2) more practice in relating training to real situations, (3) more situations provided which will help prospective teachers to develop a finer professional attitude, greater self-reliance and resourcefulness, (4) increased credits required for graduation in line with teachers in other areas, (5) longer period of student teaching, (6) supervision for first-year teachers by the teacher trainer under whom the high school teacher received her University training.

California Studies Teacher Training

California's vocational teacher training program will be re-examined by a joint council appointed by state superintendent Walter F. Dexter and Robert G. Sproul, president, University of California. Six state department of education committee members representing vocational education are:

Julian A. McPhee, director of vocational education; Samuel L. Fick, chief, bureau of trade and industrial education; Byron J. McMahon, chief, bureau of agricultural education; Ira W. Kibby, chief, bureau of business education; Bertha V. Akin, chief, bureau of homemaking education; and H. B. McDaniel, chief, bureau of occupational information and guidance.

Other committee members are Frank B. Lindsay, chief, division of secondary education, and five University of California representatives:

Edwin A. Lee, Frank N. Freeman, C. B. Hutchison, George A. Rice, and J. A. Bond.

The joint council has had two meetings. It has appointed subcommittees to study teacher training in agricultural, business, homemaking, trade and industrial and guidance education.

"Swap Sessions" in Nebraska

The problem of aiding the emergency certificate teacher is one to which every state must give some thought. Here is what Nebraska has been doing through workshops for teachers in homemaking education who lack vocational training or who have been out of the teaching field. First, a workshop of one week was held just prior to the annual state vocational homemaking conference. Subjects included philosophy of homemaking education and acquaintance with the vocational program, program planning methods and teaching material, and forms and reports required by the state department. To follow-up this workshop the department of vocational education held a series of summer conferences for new homemaking teachers. The most satisfying part of these conferences was the "swap session" in which teachers exchanged experience.

Mobley Honored

M. D. Mobley, Georgia state director of vocational education and president of the American Vocational Association, was guest of honor at a dinner given by 200 State Department of Education staff members on January 31.

Highlights of his career were portrayed in a series of humorous skits. The final episode showed "Mobley," played by John T. Wheeler, professor of vocational agriculture, University of Georgia, Athens, delivering his "Philadelphia Speech" before the League of Women Voters. John H. Cook, coordinator, division of teacher training and certification, was master of ceremonies.

M. D. Collins, state superintendent of schools, on behalf of the employees, presented Mr. Mobley with a wrist watch.

Guests included Mrs. S. C. Patterson, president, Georgia Education Association; Thomas Quigley, state director, War Manpower Commission, and former AVA president; M. E. Thompson, executive secretary to Governor Arnall; and Kenneth Williams, dean, College of Education, University of Georgia.

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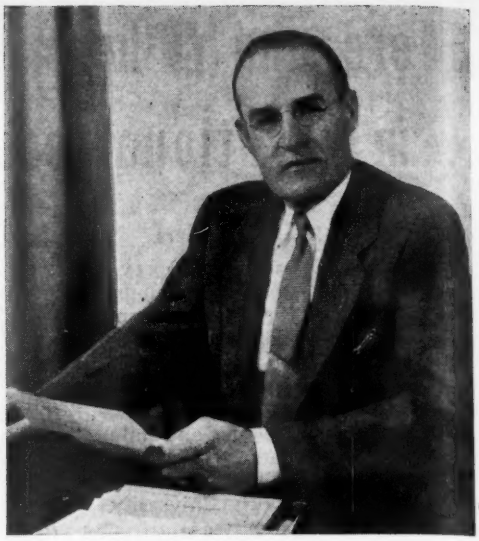

Death of AVA Vice President Guitteau. We were all saddened by the sudden death of AVA Vice President Judson Guitteau of the State of Washington. Mr. Guitteau's death reminds us that several of our pioneers in the field of vocational education in America have passed into the great beyond. Besides Mr. Guitteau, we reverently mention such names as Robert L. Cooley, Wisconsin; George P. Hambrecht, Wisconsin; R. W. Selvidge, Missouri; Wesley A. O'Leary, New Jersey; C. V. Williams, Kansas; K. G. Smith, Michigan; C. A. Fulmer, Nebraska; E. E. Gallup, Michigan; F. J. Hubbard, Mississippi; Shelton Philips, Florida; W. L. Hunter, Iowa; E. E. Gunn, Jr., Wisconsin; K. J. Sheldon and E. B. Jenks, Vermont; J. C. Beswick, California; A. N. May, Kentucky; J. C. Behre, Louisiana; W. H. Dooley, New York City; J. V. Ankeney, West Virginia; John H. Trybom, Michigan; Keith Holloway and E. B. Matthew of Arkansas; T. D. Rydingsvard, Virginia; Walter C. Wilson, Tennessee; F. T. Struck, Pennsylvania; Everett D. Packard, Connecticut; L. M. Sheffer, Georgia; Charles A. Bennett of the Manual Arts Press, Illinois; C. A. Bell, Illinois; L. R. Davies, Colorado; O. C. Kirkman, Tennessee; and Charles H. Lane, R. V. Billington, Charles R. Allen, Mrs. A. L. Burdick, Adelaide S. Baylor, R. D. Maltby, John Cummings, A. P. Williams, Roy Dimmitt (Maryland), Edith M. Thomas, and H. O. Sargent, of the Office of Education.

There are others whose names we unintentionally may be omitting here. These leaders will not be forgotten. They have left their impress not only upon the program of vocational education, but upon the entire pattern of public education in America as well.

Training center for administrators of vocational education. In a few short years many additional leaders, who were associated with those who already have passed on, will step aside and hand the torch of leadership to others younger in the service. There are many who think that our present experienced vocational education leaders would do well to establish some national summer training program for the development of administrators of vocational education. Such a training program should be open to successful younger vocational leaders of promise to give them an opportunity to thoroughly prepare themselves under the guidance and instruction of the men who have built vocational education in America. Such a program might well combine the best features of professional training under the direction of experienced leaders and an opportunity for recreation and vacation. Some beautiful and restful lakeside spot in a summer vacation area of America should be selected. The location should be such as to make available living conditions at moderate cost for men and their families. It should be possible to develop such a training program in cooperation with some of the best vocational teacher training programs in the colleges and universities of the country in order that proper professional credit could be granted. We hope someone will take the leadership in this matter—perhaps a small national committee might be entrusted with such an important project.

Reorganization of U. S. Office of Education. The report to Congress of U. S. Commissioner of Education John W. Studebaker calling for a reorganization of the U. S. Office of Education has attracted considerable interest. It is receiving rather thorough quiet study on the part of educational groups to whom the information has come as new proposals. Your AVA Executive Committee is studying the implications of this report and proposal as it may imply a pattern in the administration of vocational education. Our position with respect to these reorganization proposals will be announced later. It might be pointed out in passing that the Commissioner's plan, if put into effect, would abolish the office or position of Assistant Commissioner for Vocational Education in the U. S. Office of Education.

AVA Committee on Research and Publications. This committee had an interesting and busy meeting at Buffalo, New York, during the week of January 29. Chairman A. K. Getman will probably have a report for us in an early issue of the Journal.

Respectfully submitted,

L. H. Dennis

Executive Secretary

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130 Blanking Sheet Metal on the Squaring Shear
131 Blanking Sheet Metal with Hand Snips
134 Forming on a Hand Operated Brake
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